

Original Research

“It Seems to Sort of Wash My Brain Out”: The Experiences of Open-Water Swimmers with Depression

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Abstract

Depression is a leading cause of disability with many individuals experiencing recurrent episodes of depression across their lifetime. Existing treatment approaches have varied degrees of effectiveness, and the value of social prescribing practices is being recognised. Given the persistent nature of depression, many individuals seek out alternative methods to manage their own symptoms. Open-water swimming is becoming increasingly popular as a means of supporting mental health. There is an emerging evidence base indicating the helpfulness of open-water swimming for depression, however no study to date has explored the lived experiences of regular open-water swimmers with depression. Therefore, this qualitative study aimed to understand the experiences of individuals with depression who use open-water swimming regularly to manage their symptoms. Ten participants who identified as having depression and being regular open-water swimmers were recruited and interviewed. Using Interpretative Phenomenological Analysis (IPA), three group experiential themes and seven sub-themes were identified: 1) Standing up to Depression (the challenge of the cold, self-agency over depression); 2) Belonging in a Community (supporting one another, finding self-acceptance through group acceptance, communal joy and play); 3) Embodiment and connection in the natural world (reawakening of the senses to quiet the mind, immersed in the natural world). Novel insights into the perceived mechanisms of open-water swimming



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for managing symptoms of depression are presented. The findings indicate that incorporating aspects of challenge, community, and exposure to, and connection with, nature into social prescribing interventions for depression may be beneficial.

Keywords

Depression; open-water swimming; IPA; blue space

1. Introduction

Depression is a leading cause of disability worldwide, with around 1 in 6 adults in the UK reporting moderate to severe depressive symptoms [1]. Whilst depression is a heterogeneous condition [2], its core features include sustained low mood with a loss of interest in activities, poor concentration, hopelessness, sleep disturbance and feeling low in energy as defined by the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5) [3]. Depression can have a major impact on individual wellbeing and functioning [4] and is a substantial risk factor for suicide [5]. For those who do receive psychological or pharmacological treatment, effects are small [6, 7] and more than half of individuals develop recurrent depression, spending a fifth of their life with a depressive disorder [8].

The limitations of current treatments indicate the need to develop innovative approaches to support people with depression. Due to the chronicity of depression, integrated approaches are needed to reduce demands on the health care system [9]. Self-management, supporting an individual to manage their condition to maintain quality of life, is one such approach which is associated with reduced depressive symptoms and improved functioning [10], and is perceived as helpful by patients with depression [11]. Social prescribing practice involves supporting individuals to access a range of relevant community-based activities. Social prescribing interventions may facilitate self-management by connecting individuals to activities they find helpful, and they are increasingly used in the UK as an adjunct to improve health and wellbeing [12, 13].

A nascent field of research has identified nature-based interventions as having the potential to support mental health [14]. Nature-based interventions encompass both 'green spaces' (a natural space with trees and grass, such as parkland) and 'blue spaces' (outdoor environments that predominantly feature water). Whilst green space interventions for wellbeing have been more widely acknowledged, both in the research and for informing social prescribing practices [15], there is an emerging evidence base for the specific therapeutic benefits of activities in blue space [16]. Open-water swimming (OWS; also referred to as cold water, outdoor or wild swimming) is one such activity which involves swimming in bodies of unheated open water, and became increasingly popular during and following the COVID-19 pandemic [17]. A recent survey indicated that the number of open-water swimmers continues to grow, with most swimmers citing managing mental health conditions as their motivation to swim [18].

There is an emerging evidence base which supports the use of OWS to improve individuals' wellbeing [19]. Benefits include reduced tension, fatigue and memory problems [20] and increased resilience and positive emotions [21]. A recent review suggests that OWS improves mood and reduces mental health symptoms [22]. Of the 14 studies identified in the review, the majority

focused on the practice of OWS to support well-being and reduce mental health symptomatology in non-clinical populations. However, anecdotal evidence suggests that people are using OWS to manage symptoms of existing mental health conditions; a recent survey of 722 outdoor swimmers indicated that over half of respondents had a diagnosed mental health condition, with depression the most prevalent [23]. Further, the findings indicated that individuals with depression reported a continued reduction in symptoms through regular OWS.

A research base exploring the effect of OWS on depression is beginning to emerge. A case study of the benefits of cold-water swimming in a woman with depression was reported in the *British Medical Journal* [24]. A recent feasibility study explored OWS as an intervention for depression [25], and participants reported positive changes in their mental health and reduction in symptoms, which remained after three months. However, there was no longer term follow-up in this study to assess whether participants continued to access OWS over time, and if so, whether it continued to reduce their symptoms.

Despite the increasing interest in the area and burgeoning evidence base in non-clinical populations, there is little research exploring the lived experiences of individuals with a diagnosis of depression who practice OWS. This study will aim to give voice to people engaged in self-managing their symptoms of depression through OWS and to elicit their understanding of how and why OWS helps them manage their depression. Our research question was: 'How do people living with depression experience open-water swimming?'.

2. Materials and Methods

2.1 Participants and Recruitment

Purposive sampling was used to recruit participants. Participants were eligible if they confirmed that they had been diagnosed with depression by a healthcare professional or had been treated for depression in their lifetime. All participants were required to regularly swim outdoors in unheated water at least once per fortnight for one year. A sample of between four and ten participants was sought, typical for an IPA study of this scope [26]; comparable sizes have also been employed in similar studies exploring alternative interventions for depression utilising IPA [27]. Furthermore, IPA is idiographic in that it emphasises in-depth examinations of how individuals in their unique contexts make sense of a given phenomenon, thus smaller, concentrated samples are used [26]. To recruit a diverse sample in line with recent recommendations [28], the advertisement included a statement indicating that all participants were valued and no images of people swimming were included so as not to deter participants who might feel unrepresented in them.

Participants were recruited through social media; the study was advertised on several OWS groups based within the UK on the social media platform Facebook. Advertisements listed eligibility criteria. Interested participants were sent participant information sheets and consent forms via email. Participants who returned consent forms were contacted via email to arrange a time and date to complete the interview. Participants were also asked to complete a questionnaire pack which asked them to provide demographic data relating to their age, ethnicity, employment and marital status, as well as a brief outline of their lifetime experiences of depression. The Patient Health Questionnaire-9 (PHQ-9) [29], a 9-item questionnaire used clinically to assist in identifying depression, was included to provide a description of the sample's current experiences of depression.

The PHQ-9 scores range from 0-27 and are categorised from minimal to moderately severe depression, with higher scores indicating greater symptom severity.

2.2 Ethics Statement

Ethical approval was granted by the University Research Ethics Committee (ref 2022-15464-26581). Study design, protocols and participant materials were discussed with and approved by an expert by experience during the research design process, in line with best practice UK legislative frameworks [28].

2.3 Development of the Topic Guide

A topic guide was developed in consultation with the literature, the research team and experts by experience. It consisted of open-ended questions to encourage participants to lead discussions and was used flexibly to explore areas most salient to participants [30]. A pilot interview was conducted by the principal researcher (IC) with a person who regularly swims in open water to ensure relevance and appropriateness of the topic guide, allowing for refinements based on interviewee feedback.

2.4 Procedure

Participants joined an individual virtual meeting with the principal researcher via the video conferencing platform Zoom. The principal researcher verbally administered Module A. Mood Episodes and Disorders: Past Major Depressive Episode of the Quick Structured Clinical Interview for DSM-5 Disorders (QuickSCID-5; [31]). This was used as a clinical measure of lifetime incidence of depression. The researcher then conducted the interview recorded via Zoom. The interview was led by the participant's own stories and relevant prompts were used to gain a more in-depth understanding. Using a reflective style, the interviewer offered short summaries which ensured that the interviewer had understood what had been said and to give the participants opportunities to clarify and provide more information [32]. Following the interview, participants were provided with appropriate debrief information and were offered a monetary voucher (£15) as recompense for their involvement.

2.5 Data Analysis

Interpretative Phenomenological Analysis (IPA; [26]) was used to inform data collection and analysis. IPA is used to look at how people make sense of their experiences and the significance they attach to them [26] allowing for an in-depth understanding of a smaller group of homogenous participants. IPA is a valuable methodology for examining topics which are complex and ambiguous [33], such as depression, and it places emphasis on exploring the participants' lived experiences of a particular phenomenon [34]. IPA has been used in previous research exploring self-management of depression and outdoor activity for mental health [35, 36], and was deemed an appropriate way to richly explore the experiences of OWS in individuals with depression.

The six-stage process described by Smith, Flowers and Larkin [26] was used to analyse the data. Participants were assigned a pseudonym, and all identifiable information was omitted from the transcripts to maintain anonymity. The principal researcher (IC) listened to each interview recording

and checked it against the transcript to ensure validity. In turn, each transcript was read multiple times by the principal researcher (IC). IC analysed each transcript manually, firstly recording exploratory descriptive, linguistic and conceptual notes on the transcript by hand. Subsequently, line-by-line, the transcripts and exploratory notes were transformed into experiential statements. Experiential statements were then listed chronologically and clustered into personal experiential themes, identified by analytic processes such as subsumption, abstraction and numeration [26]. A table of personal experiential themes and sub themes was then developed for each case in a Microsoft Word document. Researcher TB completed this process independently for two randomly selected transcripts. Interpretations were discussed between the two researchers to ensure that they were plausible, coherent and grounded in the data. Personal experiential themes for each case were then copied onto a separate Word document. IC and TB discussed the themes and identified patterns and relationships between each case, and a table of Group experiential themes was developed. Themes which did not fit within the overall story of participants' experiences were discarded. An additional step of gathering all textual evidence for each group experiential theme and sub-theme was undertaken to ensure such themes were grounded in the data.

2.6 Trustworthiness and Rigour

To ensure trustworthiness of the analysis process, IC discussed and presented their interpretation of the results to TB. The benefit of this approach allowed for an in-depth discussion of each interview to ensure the interpretation of experiential statements was grounded in the transcribed data and not the researcher's own ideas and values [26]. Smith and colleagues indicate that this approach promotes a 'dialogue' between researchers which allows them to bring together their knowledge to further understand the meaning of data. A reflective log was maintained throughout the process by IC to explore sense-making in relation to the research process and analysis.

3. Results

3.1 Sample

The first ten eligible participants who responded to the advertisement and returned completed consent forms took part in the study [no participants were ineligible]. As participants could be identifiable due to the presence of specific characteristics, a table outlining individual characteristics has not been included. Nine participants identified as female and one as male. Nine of the participants identified as White British and one participant identified as Mixed heritage: British Jamaican. Participants were aged 39–72 years ($M = 53.4$, $SD = 9.9$). Eight of the participants were employed, three of whom were in full time employment and five in part-time employment. The remaining two participants were retired.

All participants had received a diagnosis of depression between 1 and 40 years ago ($M = 20.3$, $SD = 13.1$) and five participants had comorbid mental health conditions, including anxiety disorder ($n = 3$) and post-traumatic stress disorder ($n = 2$). They had all accessed either psychological therapy and/or antidepressant medication for the treatment of depressive symptoms in the past and four participants were currently accessing psychological and/or pharmaceutical treatment. Seven of the participants had a physical health condition and one identified as having a physical disability.

Participants reported that they had been OWS between 1 and 6 years ($M = 2.5$ years, $SD = 3.9$), swimming between 1–7 times per week ($M = 2.3$ times per week, $SD = 4.5$).

All participants completed the PHQ-9 and scores ranged from minimal to moderate signs of depression in the past week ($M = 6.7$, $SD = 4.6$).

Interviews lasted between 54 and 69 minutes ($M = 60$ minutes, $SD = 5$) and took place between March 2023 and June 2023. Pseudonyms have been used to protect participants' identity.

3.2 Findings

Three group experiential themes and seven sub themes were established (see Table 1). Quotes will be reported to give meaning to each theme.

Table 1 Summary of themes.

Group Experiential themes	Sub-themes	Participants per theme
Standing up to depression	The challenge of the cold	10/10
	Self-agency over depression: "Give me your worst"	10/10
Belonging in a community: "Finding my little niche"	Supporting one another: "We swim side by side"	9/10
	Finding self-acceptance through group acceptance	9/10
	Communal joy and play	9/10
Embodiment and connection in the natural world	Reawakening of the senses to quiet the mind	10/10
	Immersed in the natural world	10/10

3.2.1 Standing Up to Depression

This theme captured participants' changing relationship with their persistent depression and how the 'challenge' of OWS was used to manage ongoing symptoms. It provided a deeper understanding of the swimmers' journeys to seeking out a tool to manage their depression, which they found in OWS. It then explored the sense of accomplishment derived through OWS and the resulting impact this had on their sense of self-agency over depression.

The Challenge of the Cold. Most of the individuals felt pulled towards trying OWS in their search for effective tools to manage depression, and there was a sense of great determination and daring in taking on the challenge:

"This is the thing and I'm going to do it." (Sasha)

"I kind of wanted to challenge myself as well to see if I had it in me." (Sarah)

Sasha felt that OWS was the only option for her; she had exhausted other treatment options, and she was unquestioning in her determination to try it.

Sarah reflected that OWS felt like a challenge; she tentatively acknowledged that she wanted to challenge herself, perhaps to identify an inner strength. All swimmers spoke of the extreme nature of swimming in cold conditions and placed greater emphasis on swimming in cold, rather than

warmer, temperatures. Because of the extremeness of the cold, most swimmers felt a continued sense of doubt in their ability to overcome the challenge:

“... the, the coldness and I, I, I never feel like I can do it. I never feel like ‘oh, this is going to be easy’. It never feels like that... it always feels like a challenge.” (Amy)

Amy’s trepidation is apparent in her tentative speech, illustrating the extent of the personal challenge. She highlighted the integral importance of the challenge; the extreme cold meant there was always something to overcome, not only the cold water itself but the doubting voice she continued to experience in the face of it. This resonated with a lot of swimmers, and they reflected on the sense of inner strength they experienced through proving this voice wrong:

“it's just feeling awesome for a while, you know, when sometimes you feel really bad about yourself, it', it's good to feel, yeah, proud and strong... You feel strong. You might feel a little bit vulnerable, a little bit, sometimes pathetic... When I get like this, weepy, I just think I’m being really wet, and I should be stronger than this and I beat myself up for not being strong, you know. So that feeling of yes, I am strong, you know.” (Sasha)

Here, Sasha explained the feeling of strength and pride in overcoming the challenge which undermined feelings of worthlessness. Sasha became emotional when she spoke which appeared to trigger a critical voice. She identified her inner strength, which she had discovered through overcoming the challenge, in the moment, as a tool to quieten the critical voice telling her she was “wet” and should be stronger.

Like Sasha, some swimmers seemed to prove to themselves that they were strong through personal recognition of the challenge they overcame:

“My God, it's tough when you go in in cold water it’s not easy... and that sense of I, not just “I can do it”. It's not like that at all. It's like, “my God, I bloody well survived that.” And it’s that feeling.” (Alicia)

Here, Alicia highlighted the extent of the accomplishment; swimmers are placing themselves in extreme conditions beyond normal limits, and proving to themselves that they can manage and are capable. Whilst this was in the form of personal recognition for Alicia, many of the swimmers derived a sense of feeling strong and capable through other people’s reactions, and there was a sense of disbelief expressed by others in what they were doing:

“... the dog walkers wrapped up rightly so, because it’s chuffing freezing. And they they're looking at you, and they’re like really, really?” (David)

David seemed to question the sanity in the act himself, acknowledging that it goes against the ‘norm’ and is viewed by others as an extreme act. The reaction from other people provided a sense of validation for David; OWS was a daring feat and overcoming this was evidence of his strength and capability. This seemed novel for most of the swimmers as many had previously felt they were “a complete failure” (Hannah).

Self-Agency over Depression: “Give Me Your Worst”. Whilst all swimmers spoke about continuing to experience some aspects of depression in the present tense, there appeared to be a shift in the extent of their symptoms, which had reduced in intensity:

“I can't say I don't get down days... but I don't sink now like I used to.” (Judy)

Here, Judy appeared to want to say she was rid of depression, perhaps reflecting a yearning for it to be gone. However, she acknowledged that depression felt more transient and less debilitating now as she had overcome the feeling of 'sinking' through swimming.

She went on to speak of the reliability of swimming as a tool for improving her mood. None of the swimmers identified an instance when OWS hadn't been helpful and reflected on the faith they had in OWS:

"I know that I can feel really good... when I've had a swim, I will be feeling really positive and bright, and light, and looking forward to things. I know I've got a tool." (Judy)

Judy expressed absolute certainty that OWS worked for her; she could depend on it to lift her mood. Further, swimmers emphasised the accessibility of swimming, it was an activity they could still engage in when they were low in mood or had physical injuries. Swimmers therefore knew they had a reliable tool at their disposal to manage their depression. The reliability and availability of OWS was important as it meant it reduced the fear of depression:

"Oh you're here, you know, I can cope with you. You know, give me your worst." (Kate)

Kate personified depression and, having found OWS a reliable tool, felt able to stand up to depression when it presented itself, not only with a lack of fear, but with a sense of invincibility and power. There was a sense of revolt in her attitude; depression had been a persecutor and now she was rebelling. For most swimmers, depression was no longer the powerful "demon" it once was now they were secure in the knowledge that they could use OWS to cope with it.

There was a sense that engaging in OWS regularly was important to experience the benefits, and all individuals swam at least once a week. For some swimmers engaging in regular self-care in this way felt quite novel:

"I haven't had a lifetime of looking forward to stuff and actually being selfish... there's an element of, oh yeah, so I can do that day... and actually, that'll be good." (David)

David seemed to tentatively acknowledge that prioritising self-care did feel "good" and it was actually something that he was able to do, imparting a sense of control over depression.

3.2.2 Belonging in a Community: "Finding My Little Niche"

This theme explored the felt sense of community experienced by individuals who belonged to swimming groups or swam with others. The three sub-themes explored what this provided for swimmers, including mutual support, acceptance and joyous experiences. A small minority of individuals swam alone, their voices were also captured through their felt sense of belonging to the wider OWS community.

Supporting One Another – "We Swim Side by Side". Most swimmers spoke about the benefits of swimming with other people. They described being taken "under [the] wing" (Sasha) of other swimmers, representing the felt sense of nurture. There was a sense that the potential dangers of OWS necessitated that people look out for one another:

"So you know there's a great feeling that if somebody's struggling, you know you just, you know, just keep them going... and you know, sometimes we get lots of new people, and they're not always as confident as, as you are when you've got a bit of experience, you know.

So we just hold back a bit and make sure that they feel like they're swimming with somebody.”
(Sasha)

Sasha reflected on the pleasure gained from supporting other people within the group; she described it as part of the routine to show support and spoke in the collective of ‘we’, indicating the sense of the group as a collective support.

Individuals described the isolating experience of depression as living “like a leper” (Alicia); not only feeling unable to speak about depression, but also feeling a deep sense of shame. For some swimmers, the swimming group was a place they felt able to have open conversations around their mental health:

“... So telling him I didn't feel great that, you know, I wasn't having a great spell, and that was quite nice. So that was just a chance to share that without it being too big a deal. But just sort of saying, you know, struggling a bit at the minute.” (Sarah)

There was a sense of ease for Sarah to talk about how she felt within the group, and it seemed that this offered a refreshing change to the norm. For many, an important aspect of sharing their experiences was that it facilitated conversations around other mental health concerns, reducing their sense of ‘wrongness’ and shame:

“I used to imagine vividly that my head would be like a swirling mass of bees and, other people's heads, I used to imagine was just like, like a summer meadow just blowing in the breeze with butterflies. And I remember thinking that's how it was. I remember this longing for just some time in somebody else's head would be wonderful. But now I realize probably, had I spoken to people, their heads were swirling with masses of bees as well, and we'd all be looking for that person with the Summer Meadow Head.” (Jackie)

Jackie also spoke specifically of the process of swimming in the water facilitating open conversations:

“... So it's open conversations like that, and being in water, so you're swimming, so you're focusing on the swimming but you can just chat quite naturally. Then I think, because you don't see people's instant reactions necessarily that makes it easier to be open.” (Jackie)

Jackie describes the conversations as a “chat”, reflecting the sense of informality and ease that being in the water provides.

Finding Self-Acceptance through Group Acceptance. Swimmers discussed their swimming groups as a compilation of people from different walks of life:

“... if you actually put the group of maybe, you know, 10 of you together, you would never have thought that if you just come down to a coffee shop or the pub that you would have so much to talk about... if you're always around a certain type of person, erm, or a certain type of group of people... it's nice to have something a little bit different from what the norm is.”
(Hannah)

There was a common sense of surprise that a group of disparate people could relate to one another, and an appreciation of the refreshing change provided through being amongst such a diverse range of people. For many, they embraced the special bond they shared of their identity as an open-water swimmer:

“There's a little community down there of people, these crazy people that go open water swimming.” (Kate)

There seemed to be something outrageous or ‘crazy’ about OWS; it attracted comments of surprise and disbelief from other people, which became part of a group identity. This shared identity of unconventionality seemed to permit swimmers to be themselves within the group, celebrating each other's idiosyncrasies:

“I love just floating on my back with my arms out, and they, they, all the women say “oh you're doing your zen stuff again”.” (David)

For many, realising they could be accepted by others as their authentic self brought up emotion; the acceptance of the group diminished feelings of worthlessness and led towards a place of self-acceptance:

“Gosh, quite emotional here, when I was young I was quite socially anxious. I tended to avoid people, I had quite a low opinion of myself... all those thoughts I had when I was young, they just weren't true, people do seem to like having me around.” (Eleanor)

Eleanor reflected on her journey from feeling like an outsider, to feeling welcomed and appreciated; she could be herself and be valued for that.

Whilst almost everybody swam as part of a group, a small minority didn't. Despite this difference, they too seemed to resonate with feeling part of a wider community, which became a positive aspect of their identity:

“We are swimming. We are swimmers.” (Alicia)

Communal Joy and Play. For most individuals, depression was defined by both a heaviness and sense of emptiness. OWS appeared to directly oppose this, bringing a sense of shared playfulness and lightness:

“It's absolutely brilliant because you're swimming with the waves going up and down like that... and it's just so funny. You just, everybody comes out smiling and laughing and regardless... everybody's laughing, it's really weird.” (Kate)

Kate spoke of this playfulness feeling ‘weird’, and for most swimmers it was novel to allow themselves to play.

Following on from the previous sub-theme, group acceptance stripped away any potential for competitiveness. There was no sense of competition amongst the groups, providing an expansiveness to allow for pleasure and fun:

“No one says “oh can I stay in longer than you?”, It's not like that... No one's made to feel they should do more”. (Jackie)

The absence of competition meant there was no compulsion to prove themselves through comparison, providing permission to play.

The language that swimmers used conveyed a sense of excitement and anticipation they experienced ahead of a group swim:

“Who's going swimming in the morning? Who wants a lift?” (Eleanor)

There was an energy and a 'buzz' to how they spoke about looking forward to a swim, almost a sense of returning to a childlike state, with Sasha describing it as "a bit like looking forward to Christmas". Whilst for most swimmers this sense of anticipation was durable, building up a "reserve" (Judy) for the week, Eleanor reflected that it served to emphasise her aloneness:

"I'm hit with a sense of loneliness when I get back. I'm just coming back home... And I come home, I think, "oh it's just me again"." (Eleanor)

Without support present at home, the joyful feelings did not carry over for Eleanor and she felt a sense of dismay, highlighted by the stark contrast of being in the group with the loneliness of home.

3.2.3 Embodiment and Connection in the Natural World

All individuals swam in natural bodies of water. This theme explored the mindful process that was enabled through OWS. There appeared to be two routes towards this, each explored by a sub-theme. The first was the effect of the immersion into cold water which focused swimmers' thoughts onto their bodily sensations, and the second was the connection to, and awe in, nature, and the shift in perspective this generated.

Reawakening of the Senses to Quiet the Mind. Individuals spoke of the sense of disconnect they had felt when experiencing depression:

"I feel cut off from myself... and just like a zombie, you know, like there's no purpose. There's no reason for being." (Amy)

This description engenders a sense of feeling corpse-like, which directly contrasts to the intense physicality experienced in the cold water:

"And you feel every bit of your body getting hit with these kind of pin pricks." (Jackie)

"So there's that cold water bit that you know... it gets people in different places. So for me it's my armpits tingle... and we just go "ooh"." (Sasha)

The intense sensory experience of the cold water was emphasised; it was almost experienced as a physical pain, but Sasha indicated a sense of pleasure and re-awakening through the powerful bodily sensations. Swimmers spoke of these sensations as all-consuming, meaning the mind had "no choice" (Jackie) but to focus on them:

"... and suddenly your brain just goes 'Ah'... and all of those bad thoughts that would be there all the time, it's almost like you can't hold on to them. You can't grasp hold of them. They'll come and then it's, even if you try to think about them, they're going away... it's almost like, as if your brain's anaesthetised." (Alicia)

For Alicia, this focusing brought respite from engaging in negative thinking, which resonated with many swimmers who described rumination as a feature of depression. The sense of relief this provided was palpable in Kate's account:

"Sometimes you can feel too busy in your mind and it's almost like that sense of [sigh], it's really strange, but it's like a [sigh] sense of as soon as you get in there, oh thank god for that." (Kate)

For some, this cessation of thought was transient as they experienced it temporarily whilst in the water, with effects not necessarily enduring:

“I just want to step off the world for 5 minutes... but you just want, you just want 5 minutes off, you know, just 5 minutes off really. And I think you get that.” (Hannah)

For others, the sense of peace attained carried over after the swim and had longer lasting effects:

“It's not just at the time, it totally, it seems to sort of wash my brain out of, you know just all those tight bits of barbed wire and gunk in your brain all just gets sluiced out.” (Judy)

The powerful image described by Judy indicates a resetting effect of the water; the immediate effects brought about a lasting change. This was also described as “clearing the tape recorder” (David), as there was a sense of wiping clean and starting again.

Immersed in Nature. It was not only the sensory experience of the cold water that impacted swimmers' thoughts; many also spoke of nature capturing their attention through their complete immersion into it:

“And I remember there was one particular moment last year where I was swimming... there was all these ducks, and then there's this mum, mother duck that swam literally inches away from my nose. And all this, this little trail of ducklings behind it, and I was just like “oh my God”, and everybody else is like, “oh”.” (Sasha)

Sasha was wholly present in the water; she expressed wonderment in nature and felt privileged to be a part of it. Some swimmers, like Sasha, described swimming in areas of natural beauty, whilst others lived and swam in more urban environments. Despite the urbanicity, they too experienced a connectedness to nature through noticing everyday aspects of nature:

“There's mist rising off the water....” (Jackie)

Jackie spoke in the present tense, as if she could transport herself back to that moment in the water; therefore, even imagining the event enabled her to tap into a sense of wonderment. This appreciation of nature appeared to shift the perspective of swimmers away from the negatives towards a focus on positives:

“You see the world at its best. You know the beauty and the tranquillity. Yeah, you kind of forget about all the awful things that are going on in the world.” (Eleanor)

Connecting to nature through OWS was a grounding force for some swimmers:

“I am okay. 'Cos just as when I'm there in the water swimming I'm just there in the water swimming and that's absolutely fine. And so it's almost like, and I'm just here in the world, and that's absolutely fine.” (Sarah)

Many swimmers spoke of depression as a “struggle” or “battle” and, like Sarah, the sense of ease derived in nature and the water seemed to be the antithesis.

4. Discussion

This study aimed to explore the experiences of individuals using open-water swimming to manage symptoms of depression. The swimmers' experiences highlighted three key aspects. Firstly,

despite experiencing chronic symptoms of depression, participants reported a sense of self-agency in managing their symptoms by overcoming the challenge of cold water and being able to rely on its beneficial effects. Secondly, the role of community was important; swimmers felt a sense of belonging and acceptance within the community of open-water swimmers, supporting one another and sharing joy. Finally, the bodily experience and connection to nature facilitated a focus on the present moment and brought about a shift in perspective.

Individuals described their journeys with depression as moving from a position of emptiness, helplessness, and disillusionment with available treatments, to accepting depression as a condition that would need active management. They sought out a new management tool and found OWS. There was an emphasis on the importance of the cold temperature of the water, as this provided the challenge which, when overcome, engendered a sense of accomplishment. Research indicates that self-efficacy, the individuals' belief that they can approach and master a challenge [37], is low in depression, and that this contributes to both the aetiology and maintenance of depression [38]. Furthermore, the learned helplessness theory of depression [39, 40] argues that feeling powerless to change one's situation is integral to the development and maintenance of depression. Behavioural activation (BA) is an established treatment approach for depression that targets such perceptions, and one component of BA involves introducing behaviours that promote a sense of mastery [41]. Mastery experiences provide evidence that one is, in fact, capable of overcoming difficulties, building self-efficacy. A similar process seemed to take place through OWS; swimmers appeared to overcome their helplessness through mastering the extreme challenge of the cold. Withstanding the extreme cold proved to the swimmers that they could achieve their goal, which contributed to a sense of self-efficacy. This also provided a perception of power and invincibility; they could cope with the challenge of the cold and, by extension, they could also cope with the challenge of depression. Nature-based adventure interventions, involving an element of risk and challenge, have also reduced depressive symptoms [42], with one potential mechanism identified as enhancing self-confidence and resilience through confronting the challenges faced [43].

A key aspect of swimming to ameliorate symptoms of depression was belonging to a group. Individuals identified feeling isolated and stigmatised as a result of their condition. Isolation is associated with depression, with individuals often feeling different to, and misunderstood by others [44]. Isolation and stigmatisation also serve as barriers to recovery through diminishing self-esteem [45]. For many, the group provided a safe arena to discuss their mental health and identify shared experiences, reducing the sense of isolation and stigma. Groups gave rise to a sense of social connectedness, which has been found to be an important protective factor for depression [46]. Swimmers also described the importance of making a commitment to swim with others. Their commitment reduced any potential avoidance behaviours, which might maintain depression through reducing positive reinforcement [47]. Swimmers who were not part of a group still seemed to derive a sense of social connectedness through identifying as belonging in the wider community of open-water swimmers. However, one swimmer identified this social connectedness as a transient state, ultimately serving to highlight her ongoing experience of loneliness.

Depression is associated with perceptions of entrapment and defeat [48]. Social rank theory argues that such perceptions can stem from experiencing oneself to be of lower rank than others through social comparison, activated when in a competitive mentality [49]. The swimmers' accounts indicated an absence of competition within the swimming groups, which were experienced as wholly accepting and non-judgmental. Swimmers felt able to be their authentic selves, and there

was an ease to conversations held in the water, swimming side-by-side. This appeared to bring a felt sense of 'social safeness' within groups, attained when people do not feel the need to defend themselves or achieve resources, meaning the soothing system can down-regulate threat and drive systems [50]. This facilitates a shift away from a competitive mentality towards one of care and cooperation, and research indicates that social safeness is a protective factor against depression [51].

Many individuals described past experiences of depression, with anhedonia (the inability to experience pleasure) as a core symptom. Research indicates there is a positive relationship between being playful and the experience of positive affect, such as joy and contentment [52]. Attachment literature highlights the importance of a person's 'secure base'; a relationship with a caregiver that provides a safe base from which to explore the world [53] and therefore pursue play. The social safeness experienced in the swimming groups appeared to provide this secure base, meaning swimmers could engage in shared play, facilitating the experience of pleasure and joy.

Individuals described the experience of depression as a death-like state, with a sense of disconnectedness from the self, often reported in the accounts of lived experiences of depression [54]. The intense physicality experienced in the cold water seemed to restore their bodily experiences. Embodiment theories (see [55] for review) propose that thoughts, emotions and behaviours are influenced by bodily states and sensory experiences. Improved bodily experiences can therefore lead to an improvement in a person's sense of self as the body and self are mutually interdependent, forming an 'embodied self' [56]. Further, the sensory experience of the cold shifted their focus of attention towards their bodily sensations. Mindfulness Based Cognitive Therapy (MBCT; [57]), a recommended intervention in the UK for preventing depressive relapse [58] is based on paying attention to the present moment through increasing awareness of one's body. Research suggests that maintaining contact with the body during mindfulness exercises may provide an antidote to rumination [59]. This was reflected in the swimmers' experiences as they described the immersion as providing a period of respite from negative thinking, which had been integral in maintaining their depression.

In addition, swimmers ascribed benefits of OWS to time spent in nature. The biophilia hypothesis stipulates that humans are driven to connect with nature having spent most of evolutionary history in the natural environment [60], and nature connectedness has been found to positively relate to happiness and wellbeing [61]. Swimmers described experiencing a profound sense of connectedness to nature through immersion into natural bodies of water and this was also apparent for those who swam in more urban environments. Awe in nature has been found to improve mental health, through several proposed mechanisms [62]. In the present study, individuals described their awe in nature serving to shift their perspective away from negative interpretations of the world, with negative interpretation biases playing a central role in depression [63].

The factors identified in the present study are reflected in the wider research into the use of OWS to support mental health [22]. Individuals with depression taking part in a sea-swimming intervention described the importance of confronting the challenge of swimming for improving their mood [25]. However, the identified challenge was related to the unpredictability of the sea, as opposed to the cold temperatures as in the present study, pointing to the central role of the presence of a challenge in the activity for improving mood, rather than the nature of the challenge itself. Similar to this study, research indicates social connectedness is enhanced through swimming

with others [64]. Finally, nature connectedness has been found to be an important factor associated with the perceived benefits of water-based activities for wellbeing [65].

4.1 Clinical Implications

The findings suggest that there are several factors that should be considered when developing social prescribing or promoting self-management of depression. OWS was beneficial as it provided a challenge which, when overcome, instilled a sense of self-efficacy and agency. This reflects the mechanism involved in interventions based on behavioural activation, indicating a potential role for OWS within an individualised treatment approach. Importantly, OWS felt manageable for those with limiting physical health conditions, with seven participants identifying as having a physical health condition. This reflects the high rates of physical health problems in people with depression [66], which pose an inherent barrier to engagement in potential interventions based on physical activity. Therefore, despite its challenging nature, OWS may offer an accessible activity for many individuals with depression. The findings also highlighted the central role that a sense of belonging within a community played in improving depression. This indicates a potential role for peer support groups to facilitate the development of communities of individuals with shared experiences to provide mutual support, with such interventions found to be effective in reducing symptoms of depression [67]. Finally, connecting to nature was key, indicating the priority of social prescribing practices to take place in natural environments.

Further, despite the perceived benefits of OWS as indicated by the present study, alongside promising evidence of its efficacy for reducing depressive symptomatology from a recent feasibility study [25], a significant barrier to accessing OWS is cleanliness of the water [68]. Significant improvements in the cleaning of open water spaces are likely to be needed before OWS interventions can be designed and implemented.

4.2 Strengths, Limitations and Future Research

This study was the first of its kind to explore the lived experiences of individuals with a diagnosis of depression using OWS regularly. The majority of research in this field has focused on non-clinical populations, with only two papers exploring the beneficial effects of OWS for people with depression: one being a single case study [24], and the other a short-term OWS intervention [25]. All participants in the present study self-identified as having depression and had all experienced past major depressive episodes and accessed various treatments.

However, the results indicate that participants showed minimal to moderate signs of depression at present, posing the question as to whether people experiencing more debilitating levels of distress are able to access OWS. Previous research has highlighted the barriers to accessing OWS for the general population, including safety concerns, water pollution and weather conditions [69]. This limited accessibility is likely to impact uptake of the activity, particularly for individuals with a mental health condition who may face additional barriers when accessing nature-based activities and interventions [70]. Alternative nature-based interventions may be experienced in a similar way, and confer comparable benefits, but may pose less barriers to accessibility. Such interventions may include walking in nature [71] or gardening [72].

In-depth exploration of swimmers' narratives using IPA methodology allowed for a deeper exploration and understanding of experiences compared to alternative qualitative approaches, such

as thematic analysis [73], however limitations should be considered. Whilst there were no challenges in recruiting the intended number of participants, the sample was small, and participants were predominantly highly educated white British females, despite efforts made to recruit a diverse sample. This lack of diversity is reflected in much of the existing evidence base [22] and appears to be representative of OWS; over three quarters of respondents to a recent survey into outdoor swimming were female [18] and research suggests that white people with higher socioeconomic status (SES) are more likely to access blue spaces than non-white individuals and those with lower SES [74]. The lack of diversity in OWS has been identified and has led to the formation of groups aiming to increase diversity, for example the Black Swimming Association (<https://thebsa.co.uk>). Whilst this was not possible to address in the current study, given the 'first come first served' criteria to avoid selective sampling, future research might focus specifically on ethnically minoritised groups to explore their experiences of OWS, as well as the blocks inhibiting their access.

Further, the method of purposive sampling also represents a possible limitation; participants were recruited through OWS groups on a social media platform. Swimmers were all therefore engaging with a swimming group in some capacity. This may have led to a bias towards people who find groups accessible and beneficial, driving the identified theme of belonging in a community. Depression is associated with difficulties with social functioning [75], which may impede group participation, and there may be people with depression who swim alone. Therefore, it is difficult to establish whether this study's findings captured their experiences. Furthermore, whilst the number of participants is large for an IPA study [26], a greater sample might demonstrate the robustness of the themes found.

Moreover, the positive accounts of swimmers were striking, with only one potentially negative aspect of OWS being discussed, despite the inclusion of questions exploring negative experiences throughout the topic guide. As above, this may be a product of the nature of the sample; they had volunteered to participate and had persevered in swimming outdoors for a long duration. Furthermore, inclusion criteria stipulated that participants must swim at least once per fortnight, which likely contributed to highly selective sample, thus limiting the broader applicability of the findings. Future research could explore the experiences of people with depression who have attempted OWS and not continued, to unearth the perceived negative aspects which may pose barriers to continuing.

Finally, future research might explore the use and experience of OWS in other mental health conditions. It may well be that a sense of community connection, immersion in nature, embodiment in relation to OWS are not unique to depression. Research suggests that such factors do indeed have a bearing on other mental health conditions, such as PTSD, in relation to other nature-based activities [76].

5. Conclusions

The present study provided novel insights into the experiences of individuals using open-water swimming to manage depression. Swimmers developed a sense of self-agency over depression through overcoming the challenge of OWS, as well as sharing experiences and a sense of belonging within the OWS community. Connecting to nature was also an integral feature of swimming. The mechanisms of challenge, community and nature exposure should be considered when developing social prescribing practices.

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Author Contributions

Imogen Crook- Principal researcher: devised the research and completed all interviews, analysis and write-up. Richard Brown and Toby Bell- Supervisors: supported research development, analysis and write-up.

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Competing Interests

The authors have declared that no competing interests exist.

Data Availability Statement

The data collected was of a qualitative and personal nature, and the availability of full transcripts of interviews may make participants identifiable and contravene our ethical permissions. As such, the full data set is not available for open access. Researchers are encouraged to contact the research team to discuss the appropriateness of accessing the full data.

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