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Locating oneself in the past to influence the present: Impacts of Neolithic landscapes on mental health well-being

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ABSTRACT

There are well-established links between mental health and the environment. Mental illness is a global issue, and international policies increasingly focus on promoting mental health well-being through community-based approaches, including non-clinical initiatives such as therapeutic landscapes and the use of heritage assets. However, the empirical evidence-base for the impact of such initiatives is limited. This innovative study, known as Human Henge, used a mixed-methods approach to investigate the impact of immersive experiences of prehistoric landscapes on the well-being of participants with mental health issues. Uniquely, the study followed participants for a year after their participation in the project to explore the long-term impact of their experiences on their mental well-being. Findings highlight that, overall, participants experienced improved mental health well-being from baseline to mid- and end-of programme ($p = 0.01$ & 0.003), as well as one-year post-programme ($p = 0.03$). Qualitative data indicated the reconnection of participants with local communities, and with other people, in ways that improved their mental health well-being. These data highlight the effectiveness of using heritage as a means of improving the well-being of people with mental health issues.

1. Introduction

Well-being is a multi-dimensional resource in human life essentially linked to *how things are for individuals in the world* (Galvin, 2018). Internationally, well-being is highlighted as one of the Sustainable Development Goals (SDG United Nations, 2015). In 2010, the Measuring National Well-being (MNW) programme was established in the UK to monitor and report trends of well-being (Office for National Statistics, (ONCS) 2017). It is measured across 10 domains; personal well-being, relationships, health, what we do, where we live, personal finance, the

economy, education and skills, governance and the natural environment (Office for National Statistics, 2019). Of particular interest to this paper are the domains of personal well-being, health and the natural environment.

The concept of nature in promoting well-being has a long history emanating from the 19th century, asserted by environmental theorists, philosophers and psychiatrists (Noone et al., 2017). Gesler first recognized that physical environments coupled with social conditions and human perceptions could produce atmospheric conditions conducive to healing (Bell et al., (2018)). This moved thinking forwards to considering

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how such therapeutic landscapes could be utilised in promoting health and well-being. However notions of therapeutic landscapes are themselves multi-faceted. Bell et al. (2018) refers to palettes of place, which considers both green and blue space; green space referring to the land based environments whereas blue space refers to water spaces. In addition, there are therapeutic landscapes consisting of a hybrid of both blue and green space. Irrespective of the type of therapeutic landscape, Conradson (2005) argues that these need to be considered as a relational outcome emerging through a complex set of interactions between the individual and the broader socio-environmental setting. This focuses upon three aspects; firstly holistic well-being incorporating the psychosocial aspects of the person; secondly, interactions between the individual and the landscape which are themselves complex embodied encounters and lastly, the relational analysis which considers not only the immediate self-landscape encounter but the wider socio-natural relations in which the individual is located.

As identified above, one of the domains of well-being is health; the World Health Organisation (2014) defined health as "... a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". This asserts that mental health is a fundamental aspect of health and well-being; furthermore, they define mental health as a state of well-being in which individuals are able to reach their potential, cope with stresses of life, able to work productively and make a contribution to society (WHO 2014). This is important globally. Steel et al. (2014) analysed 174 studies undertaken between 1980 and 2013 across 63 countries and identified that 20% of respondents met the criteria for a common mental disorder during the last 12 months whilst 29.2% were identified as having experienced a common mental disorder at some time during their lifetime. The most recent Adult Psychiatric Morbidity Survey in the UK, conducted during 2014, highlighted that one in six people (16.6%) aged over 16 years reported symptoms of a common mental disorder during the week prior to the survey, a figure that has been increasing steadily since 1993 (Baker, 2018). From this it could reasonably be suggested that everyone is likely to be exposed to mental illness at some point during their lives. Not only are mental illness highly prevalent, but also the impact on individuals and their families can be significant. Vigo et al. (2016) estimated that the burden on individuals accounts for 32.4% years lived with a disability (YLDs) and 13.0% of disability-adjusted life-years (DALYs). Despite this, there remains an imbalance between the global burden of mental illness and the attention it receives.

The links between mental illness and environment are not new; during the nineteenth century asylum landscapes were often designed to aid recovery facilitating the return of patients to a functional role in society. This led to the creation of a recognized specialization in landscape gardening (Rutherford, 2005, p. 62), for example the grounds of the private asylum Brislington House in Bristol opened in 1806, were designed by Edward Long Fox to include pathways and walks in the hope of improving the emotional state of patients (Hickman, 2005, p. 59). This focus on environment and landscape as therapeutic tools in the treatment of mental illness declined during the twentieth century as new clinically-based approaches to mental healthcare gained popularity (Collins et al., 2016). More recently, the focus on promoting mental health and well-being has led to a renewed interest in the role of therapeutic landscapes (Griffith, 2018). This global focus upon mental health as well as mental illness reflects growing awareness that mental health is not simply the absence of mental illness; rather it is two dimensions that, although strongly correlated, are not polar opposites (Lombardo et al., 2018). For example, an individual with a low level of mental well-being may not necessarily have a diagnosable mental illness, and individuals with a mental illness can experience mental well-being. This reflects the recovery model of mental health, described as a personal process of changing one's values, feelings and attitudes, focussing upon living a satisfying and hopeful life with limitations that may be caused by illness (Anthony, 1993). CHIME is an acronym commonly used in recovery focussed mental health reflecting five recovery

processes; connectedness, hope, identity, meaningfulness and empowerment (Leamy et al., 2011). Duff's (2012) core aspects of 'enabling' places reflect these recovery principles focussing upon promoting recovery through social resources, (promoting opportunities for social interaction, opening up social networks), material resources (expanding one's horizon as well as one's home environment) and affective resources (how individuals feel).

There is increasing recognition of the importance of nature and engagements with the environment as a means of promoting positive mental health (Bloomfield, 2017) this is due to acknowledgement of the positive association between individuals' exposure and engagement with natural and historic environments (Gesler, 2003; Griffith, 2018; William, 1993). However, empirical evidence of the impact this has on health and well-being is mixed. Research in a community setting by Wu et al. (2015) with 2424 older people identified that higher exposure to green space was associated with fewer mental disorders in the sample community. Conversely, a theory-led mixed-method systemic review by Lovell et al. (2015) exploring the impact of environmental enhancement activities on health identified that very few of the studies examined presented evidence of impact on health and well-being. A more recent review examining quantitative and mixed method studies by Cipriani et al. (2017) explored the benefits on horticultural therapy (HT) and mental health. This identified 14 studies which were assessed using McMasters Critical Review form for quantitative studies (MQCRF) and identified wide variation of quality of the studies between 43 and 100%. Whilst this review noted that HT could lead to significant improvements of 13 of the 14 studies were conducted within a health service location (Cipriani et al., 2017). Experimental research by Hosseinpoor Najjar et al. (2018) on HT in 30 people with chronic illness in an outpatient service (n = 15 control group, n = 15 experimental). The experimental group had 10 sessions of HT over 5 weeks found significant improvements in stress, anxiety and depression scores however scores were only collated before and after the intervention. Bell et al. (2018) argues that few studies have examined how the therapeutic effect persists or wanes over period of time as people return to their normal day to day lives. This lack of evidence led the Natural England research report (2016; 2) to conclude it is unknown whether 'exposure to natural environments causes better mental health outcomes or whether people with better mental health tend to visit nature more often or live in greener areas'.

Alongside the growing focus on therapeutic landscapes has been an increasing interest in utilising heritage to promote mental health and well-being and this has included research in museums (Kindleysides and Biglands, 2015) and archaeology through 'Operation Nightingale' (Ministry of Defence & Defence Infrastructure Organization, 2019) and Waterloo Uncovered, (2018). The use of heritage as a therapeutic process has had less research than that of therapeutic landscapes. Reasons for this are unknown; however costs may be one as there is evidence that utilisation of heritage is linked to income. The taking part survey (DMCS 2018) identified a significant difference in that individuals from higher socio-economic groups are much more likely to visit a heritage site or attend a museum in comparison to individuals from lower socio-economic groups. This growing interest in landscapes and heritage as therapeutic tools resulted in a UK White Paper on Culture (DCMS, 2016) which highlighted a commitment for the cultural sector to embrace the improvement of health and well-being acknowledging the symbiotic relationship between the two. This policy emphasizes the role that culture can play in promoting mental health well-being both within society as a whole and for individuals (DCMS, 2016, p; 15). However, this paper again acknowledged the lack of robust evidence, especially with regard to the potential of heritage in promoting well-being; it noted that much of the limited literature focused upon heritage's potential to contribute to well-being rather than empirical assessment of its impact. Ultimately, Darvill et al. (2018) assert the urgent need for more fully evaluated studies exploring the impact of heritage on well-being.

Given that the literature about the potential of heritage to improve mental health and/or well-being is sparse, the current study, known as

Human Henge, aimed to assess the impact of activities involving the exploration of the Neolithic landscapes by a group of participants with mental health problems. The Human Henge intervention was a facilitated programme where participants with mental health problems came together to learn and adventure in landscape, focussing on sites and monuments of Neolithic and Bronze Age date (4000–1000 BC) within the World Heritage Site of Stonehenge and Avebury in Wiltshire, UK. These places were chosen because of the relatively easy physical access facilitated by English Heritage and the National Trust, and the intellectual challenges provided by exploring cultural contexts quite different from anything likely to have been encountered by the participants in the modern world. The use of neutral safe spaces in this way provided the platform on which to build a programme of cultural heritage therapy. Experts, carers, support workers, and contributors from a range of cultures supported journeys through the chosen landscapes, as explained more fully elsewhere (Darvill et al., 2019, chapters 5 to 8). In brief, each programme involved ten half-day ten half-day sessions held at a range of sites, each tied to a specific set of activities. Participants walked, listened to experts, shared their own expertise, handled artefacts, were encouraged to sing, to connect with ancestors, to craft, to tell stories, to write blogs, and to take photographs (Fig. 1). The programme was run three times, and a systematic research evaluation ran alongside. Groups 1 and 2 were based at Stonehenge in autumn 2016 and spring 2017, whilst Group 3 was based at Avebury during spring 2018 with only slight variations in its delivery. We decided to move the location of the Neolithic site as we were interested to explore whether a contrasting open stones in Avebury would have different results than the closed stones of Stonehenge. Furthermore Stonehenge has more prestige publicly than the stones in Avebury and we were also interested in exploring the impact of this. Each group also devised their own celebratory session at the end of their programme. The research question that framed the research was “Does a creative exploration of historic landscape achieve sustained, measurable mental health well-being outcomes for people with mental health conditions?”

2. Methods

2.1. Study design

This was an evaluation study using mixed-methods. Mixed-method research was chosen as it enabled methodological triangulation as an approach that arguably leads to more rigorous results (McKim, 2017), as well as offering the opportunity to explore more complex aspects of the human and social worlds than would otherwise be possible from a single approach (Malina et al., 2011). Data were collected using both quantitative and qualitative methods (Fig. 2) at four intervals (Baseline; mid 10 week intervention; end of ten week intervention; and 1 year post-intervention). Four intervals were chosen as in order to explore the long term impact that Bell et al. (2018) argues is often missing as much of the research to date has only collected data at 2 intervals (baseline and end of programme).

2.2. Study sample (participants)

The study sample was chosen from the Richmond Fellowship, a charity specialising in supporting individuals with long-term mental health needs. A convenient sample of 25 people registered with the charity, were invited to participate in the study. All of the participants self-identified as having ongoing mental health issues and lived within the geographical area of Wiltshire. Whilst all of the participants were recruited from Richmond Fellowship, they had different engagement levels with the charity, for example, a couple of the participants belonged to an activity group whereas others linked with an outreach or support worker. The research did not explore in-depth the types of mental health issues the clients had, nor their current clinical care. The total sample was divided into three groups based on their registration time into the study (Table 1).

2.2.1. Quantitative data collection

A paper-based questionnaire sought basic demographic information

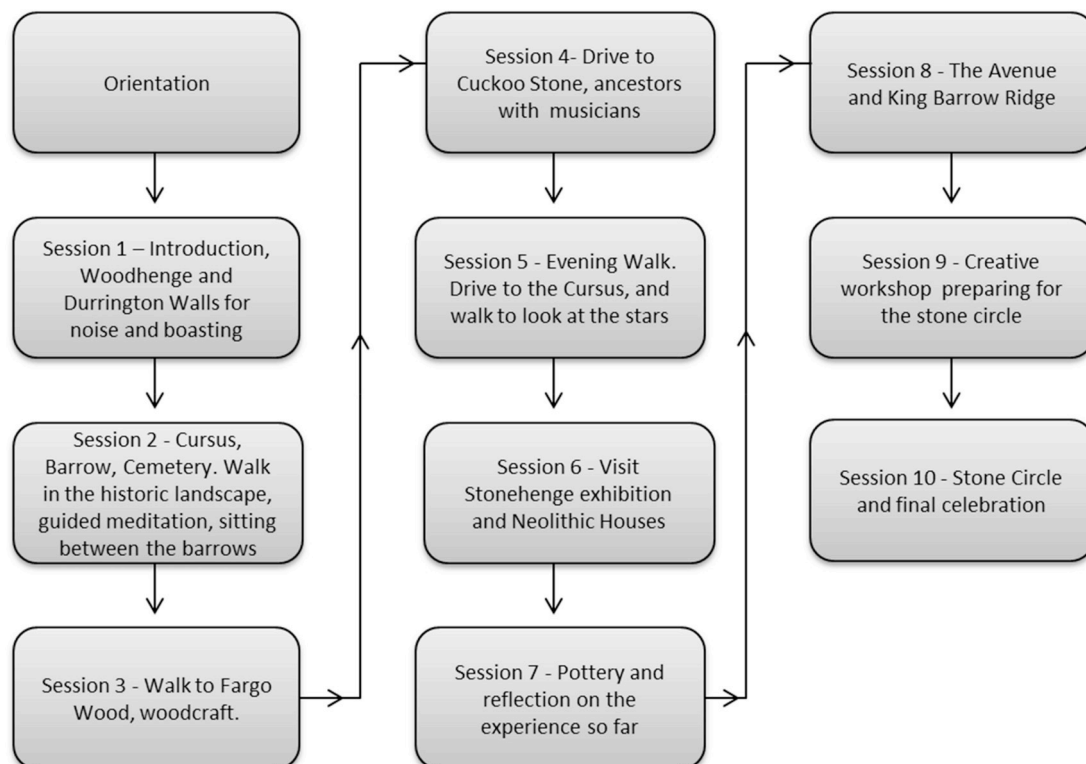


Fig. 1. The human henge programme at stonehenge.

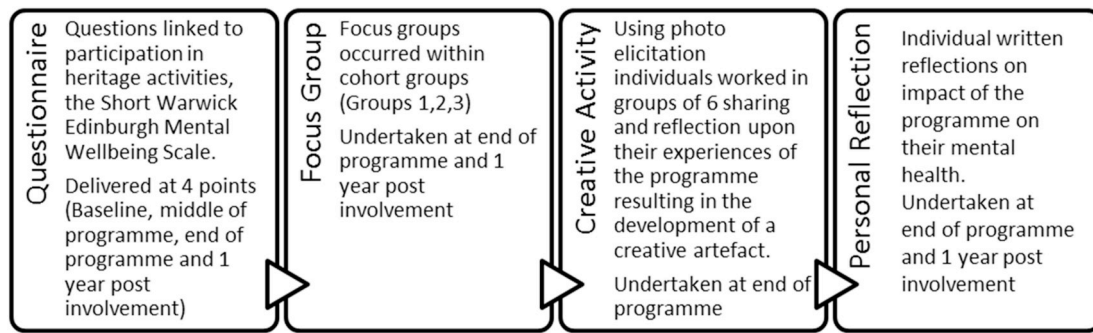


Fig. 2. Data Collection methods.

Table 1
Demographic characteristics of the study sample.

	Baseline	Mid intervention	End of intervention	1-year post intervention
Age (years)				
Median (range)	44.00 (21–77)	42.00 (21–77)	43.50 (21–77)	41 (21–77)
Interquartile range (IQR)	22	21	22	24
Gender, Number (%)				
Male	16 (45.7)	15 (50.0)	14 (46.7)	13 (76.5)
Female	19 (54.3)	15 (50.0)	16 (53.3)	4 (23.5)
Group, Number (%)				
One	13 (39.4)	10 (28.57)	10 (28.57)	7 (20)
Two	10 (30.3)	9 (25.71)	9 (25.71)	5 (14.28)
Three	12 (36.36)	11 (31.43)	11 (31.43)	5 (14.28)

(date of birth, gender, etc.), as well as a mixture of open free-text and scale questions related to the participants interests in history and heritage. A shortened version of the Warwick-Edinburgh Mental Well-being Scale (SWEMWBS) was also incorporated into the questionnaire to measure the participants' mental well-being (Stewart-Brown et al., 2009). The original WEMWBS comprises 14 positively worded item scales with 5-point Likert response categories, ranging from "none of the time" to "all of the time" (Tennant et al., 2007). The short version of WEMWBS has been developed using a rigorous test of internal consistency and includes only 7 items, mostly representing aspects of psychological and eudaimonic well-being. It has been shown that items included in the SWEMWBS are highly correlated with the full 14 scale (Spearman $\alpha = 0.954$, $\alpha > 0.8$) and provides a valid raw score by summing the score for each of the seven items. The raw score is then converted to a metric score using a linear transformation (conversion table) in order to provide valid parametric analyses (Stewart-Brown et al., 2009). The scores range from 7 to 35, with higher scores reflecting greater overall mental well-being. Participants completed the SWEMWBS prior to their engagement in the Human Henge programme and thereafter the questionnaire was completed at three other occasions: in the middle, at the end of the 10-week intervention, and one-year post intervention.

2.2.2. Qualitative data collection

Qualitative data collection consisted of a variety of methods including a creative activity, personal reflections as well as focus groups. Focus groups occurred twice, at the end of the ten weeks and one-year post engagement. Focus groups were chosen as they are particularly useful when discussing sensitive topics (Kitzinger, 2000) where participants can receive support and reassurance from other participants. In addition, focus groups enable researchers to go beyond the data obtained in the survey thereby providing a greater depth of understanding (Leung and Savithiri, 2009) regarding participant's mental health

well-being. Within the focus groups at the end of the ten weeks, participants were asked "I'm interested in hearing about your experiences and your thoughts about your participation in the Human Henge, can you please tell me about it?". One-year post intervention participants were asked "It is now one year since you were involved in the Human Henge programme and I'm interested in hearing about your experiences and your thoughts about Human Henge one year on".

Whilst it is recognized that focus groups are useful in eliciting sensitive information, these methods were supplemented with personal reflections, enabling participants to share thoughts privately to the researcher, and a creative activity; only the focus group and personal reflection data are presented in this paper.

2.3. Ethical considerations

Ethical approval was obtained from the Bournemouth University Research Ethics Committee. All participants demonstrated capacity at the point of information-giving and recruitment to the study and throughout the entire length of data collection. This included understanding that their choice to participate would not affect their ability to attend and engage in the Human Henge programme. All participants were provided with information about the study, which asserted that participation was voluntary and confidentiality would be maintained. Explicit informed consent was provided by each participant.

2.4. Data analysis

Quantitative data were analysed using Statistical Package for Social Sciences (SPSS) software (IBM, version 24). The data set was checked for outliers and missing replies. For participants who did not complete the SWEMWBS at any follow-up time points, no imputation techniques were used to replace the missing replies with substituted values. Therefore, a per-protocol analysis was conducted on data including only those participants who completed the SWEMWBS at any of the study time points. Given the relatively small sample size, non-parametric tests were employed and relevant assumptions were tested. To examine the changes in SWEMWBS scores within the intervention groups from baseline to mid, end, and one-year post-intervention, the Wilcoxon signed-ranks test was employed. The significance level was considered to be 0.05.

Qualitative data from focus groups were audio-recorded and transcribed verbatim. Transcribed accounts from the focus groups, and personal reflections, were then analysed using inductive thematic analysis (Braun and Clarke, 2006). This involved reading the whole transcript and highlighting key words or phrases. Individual codes were then identified by the lead researcher. All individual codes were then analysed to extract key themes for each of the three participating groups. Potential themes were then considered across the whole data set, generating a thematic map of the data that was discussed across the research team. Analysis continued in defining each of the themes and the stories they told regarding the participants experiences of the Human

Henge programme and the impact on their mental health and well-being.

3. Results

3.1. Quantitative data

Table 1 shows the age and gender characteristics of participants of the whole sample and across the groups at different points in time. A total sample of 35 individuals with a self-identified long-term mental health problem was recruited into the study (13 in Group 1, 10 in Group 2, and 12 in Group 3). However, two participants in Groups 1 and 3 joined the study after the baseline measurement was completed with the result that no baseline information was available for them. The age range of the studied sample was diverse (56 years), and there were more female participants than males (53.3% against 46.75%).

The age and gender demographic within groups were not equally distributed. Participants in Group 1 were reported to be older than the two other groups (average 56, 43.5, and 37 years respectively) and were also mostly males (69.2%). The gender distribution in Groups 2 and 3 were relatively similar where most participants were female. However, participants in Group 2 tended to be older (median = 43.3 vs. 37 years). A smaller number of participants in all the groups took part in the one-year post intervention follow-up where the lowest participation rate was in Group 3 (41.6%: 5 out of 12).

Fig. 3 shows the change in median SWEMWBS score across the intervention groups from baseline to one-year post intervention. At baseline, participants in Group 1 had a higher median SWEMWBS score in comparison to participants in the two other groups, and changes in their scores from end to one-year post intervention was quite small. Participants in Groups 2 and 3 had higher median SWEMWBS scores in the middle and end of intervention assessments. Looking at the median score one-year post intervention, Group 3 improved their median scores, whilst Group 2 median scores reduced slightly from their end of intervention score. However, both Groups 2 and 3 one-year post intervention median scores were improved from their baseline assessments. The distribution of SWEMWBS median scores between male and female participants across the study time points was fairly similar (results not shown).

Changes of score in SWEMWBS measures within the groups from baseline to different study time points was assessed using Wilcoxon signed-rank test (Table 2). The results of the test showed that there were significant improvements in the median SWEMWBS score in the study sample from baseline to middle ($z = -2.57$, $p = 0.01$), end of intervention ($z = -2.94$, $p = 0.003$) and one-year post intervention ($z = -2.22$, $p = 0.03$).

At the end of the Human Henge programme participants were asked

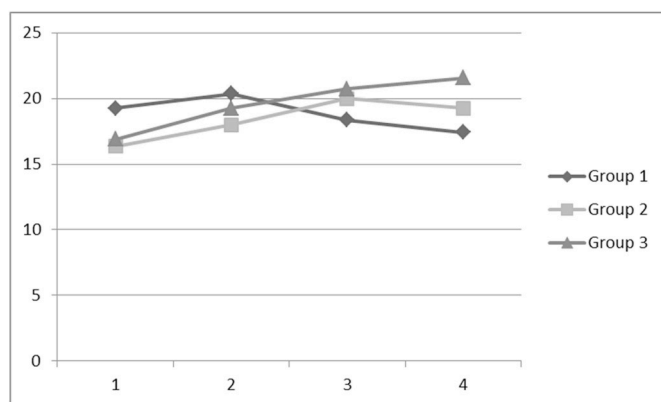


Fig. 3. Median SWEMWBS score in the study groups across the study time points.

Table 2

Change in SWEMWBS score in the intervention groups from baseline to different study time points.

All groups	Median	Wilcoxon signed-ranks test Z
Baseline (n = 28)	18.55	0.01
Mid-point	19.53	
Baseline (n = 28)	18.28	0.003
End-point	19.25	
Baseline (n = 17)	17.43	0.03
1-year end-point	19.25	

if they felt that Human Henge programme had impacted on their mental health: 23 (79.3%) identified that it had a positive impact upon their mental health well-being, 6 (20.7%) were unsure, and 6 people did not answer to this question. The figures for one-year post intervention identified that 88.2% (n = 15) of participants stated that the project had a positive impact on their mental health well-being whilst 11.8% (n = 2) participants were unsure.

3.2. Qualitative data

Analysing data from the focus groups and personal reflections collated at the end of programme (Groups 1, 2, and 3) and one-year post programme (Groups 1 and 2) led to the identification of four themes: Feeling connected; Being me; Challenging oneself; and Impact on mental health well-being.

3.2.1. Feeling connected

Across all three groups there was a strong sense that part of their achievement centred on re-connections to people, place, and lost passions. Re-connecting with people focussed on linking with their past and past lives remembering happy times before they became ill: "I used to come to Stonehenge 40–50 years ago with my little children and it was so different then. You were free. You climbed on the stones, they played their games around the stones and it's so different today" (Male participant, Gp1 Focus Group, end of intervention). Participants also re-connected with earlier peoples who walked and lived in the landscape they were exploring, enabling them to reflect upon the similarities and differences of the lives of earlier peoples and their own experiences of living in society today. Reflecting on handling the ancient pottery one participant noted: "they had their hands on it and now I've got my hands on it and so that was like a connection and they would have had their same worries, perhaps not in exactly the same way, but shelter, food, family, those things would have been just the same for them, so I think there's a connection" (Male participant, Gp3 Focus Group, end of intervention).

This connection with people was not easy for all of the participants. At the start of the programme, when participants were asked if they had any worries or concerns about being involved in Human Henge, 18 participants expressed feeling apprehensive due to meeting new people and being in a group setting (n = 10) and anxiety (n = 6). Although some of the participants identified anxiety and fear of being in a group, actually being with others had a major impact upon the participants' enjoyment of Human Henge. This is perhaps best illustrated by the example of one male participant in Group 1. In the Focus Group at the end of the 10-week programme he said that: "All the singing and all that ... I find that really terribly frightening. I mean, I love the history ... that's why I wanted to come here. But having to take part in all the dancing and singing and all that, I just found that so difficult, I just had to turn around and walk away. I just couldn't handle it." Yet reflecting upon this in the Focus Group at one-year post involvement he reflected that: "Oddly, I mean at the time, I just could not stand being in a group of absolute strangers and so many people, I just found that really, really difficult. And then, I suppose sort of as time went on, I looked back and I thought, Oh, I do miss being there quite a bit, you know, even though I found it really, really difficult". What was interesting for this gentleman was his reflection that the landscape influenced his experience of the Human Henge programme. The wide

open space in which the programme was implemented provided him a sense of freedom to be able to walk away from the group when he felt uncomfortable. However his love of history influenced his decision to remain on the programme and a year later he realised that he missed the group aspect although at the time this was challenging for him.

It was evident that the impact of the 10-week programme had been so powerful on some participants that they expressed anxiety and fear regarding the potential repercussions on their mental health and well-being when the intervention came to an end. For some participants (particularly Groups 2 and 3) this was very difficult, and some of them became distressed during the focus group session. They were particularly worried about losing the sense of belonging that had developed, the social acceptance that they felt within the group sessions, and the friendships they had made:

“I’m devastated it’s over. [Tearful] I don’t want this to finish” (Female participant, Gp2 Focus Group, end of 10 weeks)

*“And I just think it’s a bit hard that they’re just robbing it from us and taking it all away, because after this, like **** [participant name] said, at that week where you didn’t have it, it was hard. It was a hard week. You, know, because you had nothing else. But now it’s going to be gone and I feel like some of you I’ll probably never see again, and I don’t want that* (Female participant, Gp3 Focus Group, end of 10 weeks).

At the one-year post interventions the ongoing experiences of the three groups were different. Group 1 had not really stayed connected; instead they reverted back to their previous Richmond Fellowship groups. That said, they had increased their social engagement with others, one had joined a local mental health support group, another had reconnected more strongly with his children, and a third recognized he was becoming much more social since his engagement with Human Henge. Group 2 had established a more formal mechanism for continued connection through a social media group as well as ongoing group activities organized separately but in conjunction with the Human Henge project team. Group 3 had established small friendship groups that remained even one-year post intervention.

In addition to connecting with people, there was also a re-connection to place, established through exploring their local area and landscape. These connections had previously become fractured as a result of their mental illness, mainly due to unhappy memories associated with time and place as well as poor experiences of feeling discriminated and stigmatized because of their mental illness, both of which culminated in them isolating themselves from others:

“Helped me connect with local people socially and local places with happy memories. Feeling more connected with Wiltshire and feeling like I have a place to be/belong in Wiltshire” (Female participant, Gp 2, one-year post intervention)

In addition to reconnections with people and place, participants also found themselves reconnecting with hobbies that they had lost when they became ill (history, photography, love of nature) and also connections to new hobbies including poetry:

“... my past work and life and interests would be outside and working in exciting projects in nature. And because of things going on I couldn’t do that. I just couldn’t cope with it. And I think Human Henge has just been key to allowing me to kind of re-access the things that I enjoy without the contamination” (Male participant, Gp2 Focus Group, one-year post intervention)

3.2.2. Being me

It was clearly evident that most of the participants found it difficult living in society with their mental illness, they felt judged and discriminated against and responded to this by further isolating themselves. They spoke of having to act in a certain way when out in the

community. By contrast, they expressed being able to be themselves during the Human Henge activities and this was very important to them:

“Yeah, I think in this group there’s definitely a feeling of belonging and of not being judged. It’s been discussed quite a lot within the group that people feel like we’re not being judged here. We ... we feel that we can put across our ideas and almost in the same boat so there’s so much more understanding whereas with the rest of the community there’s a lot of judgment and yeah just ... it just feels so comfortable in this group (Female participant, Gp3 Focus Group, end of 10 weeks).

“Nice to talk to people who are on the same wavelength as me and not be treated like I’m daft or anything if you got what I mean, you know. I often get treated like I’m stupid or something (Female participant, Gp2 Focus Group, end of 10 weeks).

I feel that I have to have a person in when I go to the park or me and my friends I have to have this persona where I hide who I really am because ... because if not it would cause a drama and especially if I feel anxious I have to really kind of hide it and make sure that no one tolerate it and hide it and here I don’t have to. It’s much more relaxed and ... (Female participant, Gp3 Focus Group, end of 10 weeks)

“We feel like ourselves here. To respond to your question, I feel like more like myself here because I don’t have to pretend to be tough ...” (Female participant, Gp3 Focus Group, end of 10 weeks)

Participating in Human Henge resulted in the participants reflecting upon their mental health journey to date, one of the strong aspect coming from this was a reflection that they relished not being treated like a ‘patient’ or ‘being ill’, but rather a human being interacting with other human beings and this was a stark contrast to their previous experiences of therapy programmes:

“I think one of the nice things was that it wasn’t just that we’ve all met up every week, we had an activity that wasn’t related to being a nutter. It was related to being a normal human being and we got to just walk ... I like the walking and talking and learning all at the same time and being a human being rather than being as an illness or a condition or a service user, like I’ve actually been a human being for three months with other human beings (Female participant, Gp2 Focus Group, end of 10 weeks)

“Like you say, basket weaving is for idiots, whereas we’ve been taught basket weaving from an archaeological or intellectual, historical point of view and we’ve looked at the type of thing we’re using to make the basket with ... and it’s been fascinating” (Female participant, Gp2 Focus Group, end of 10 weeks).

3.2.3. Challenging oneself

Through associating with others with similar experiences participants gained the strength and confidence to revisit local places as well as engage more readily with their local communities. These things became a positive experience for them. Participation in Human Henge gave some participants confidence to step outside the boundaries they had previously built-up for themselves while trying something new, something they would never have contemplated before. For some, it was being within the group setting itself, leading and facilitating a Human Henge activity. For others it was challenging themselves outside the group, creating new opportunities and possibilities linked to employment or new hobbies:

“I found it difficult ... really difficult to stand there in front of a group of people talking to them an’ all that, but afterwards I thought ... phew! I did really well there!” (Male participant, Gp1 Focus Group, end of 10 weeks)

“This is the first time I’ve done them (taken photographs) and you’ve really influenced me to go into a shop and say “Look this is what I’ve got, do you wanna buy it off of me?” And I think that’s awesome that is. And then a couple’a weeks ago I did actually take my cards into a shop in

***** and they bought almost a hundred of my cards and it was really exciting for me” (Female participant, Gp2 Focus Group, end of 10 weeks)

Participants gained inspiration and strength from the group, and this was instrumental in themselves having the confidence to try new things. A female participant (Gp3, Focus Group, end of 10 weeks) sums this up: “... you see people grow and they overcome their personal struggles, some physical, some mental and that gives you some strength and some determination to overcome your own, you know, push yourself a little bit”.

3.2.4. Impact on mental health well-being

It was evident from the qualitative data that the majority of participants perceived that their mental health well-being had improved as a result of participating in the programme. For some participants, the programme provided them with a better insight into their mental health issues while helping them to develop strategies to manage these issues:

“I feel it’s broke down my social anxiety, my understanding of them has opened up a little bit in that sometimes it’s the barriers I put up that push people away. I think coming here and being with people, is breaking down the barriers. Only speaking for myself, you can get trapped up in making the world so small ...” (Female participant, Gp3 Focus Group, end of 10 weeks)

For one female participant in Group 2, being involved in Human Henge gave her a focus for the first time in years as she had become increasingly housebound and isolated because of her mental illness; it also reduced her self-harming, and for her this was very significant. She shared:

“there were two things, one I hadn’t committed to anything for ... over ... three years, so for me to actually commit to something was quite a big thing anyway. But then also to commit to this I also had to be disciplined because unfortunately at times I self-harm really badly so to commit to this I had to agree with my husband that on the day I come here I would not self-harm, and the first week I did but since then I haven’t” (Female participant, Gp 2 Focus Group, end of 10 weeks).

It is important to note that participating in Human Henge did not eradicate all the ongoing mental health challenges that participants faced, instead it provided them with more confidence and a belief in their abilities to manage these challenges. One of the female participants in Group 3 noted “I think I’ve learned that I can cope with like my symptoms a lot better, like before I would just run away, but now I’m like learning to deal with it”.

4. Discussion

The objective of the study was to investigate whether people with mental health conditions could benefit over the long-term from creative exploration of Neolithic landscapes. Descriptive analysis showed that the SWEMWBS score improved most in participants from Group 3 over time (Fig. 1). Further detailed quantitative analysis of the study sample showed that, overall, there were significant improvements in the median SWEMWBS score from the baseline assessment to later study points: midpoint; end of intervention; and one-year post intervention.

The distribution of SWEMWBS score between women and men in this study were similar but could reflect the fact that the SWEMWBS questionnaire is less sensitive to gender differences as a nationally representative study in the UK for mental health well-being norms using this questionnaire has reported (Fat et al., 2017). Regarding the improved SWEMWBS scores in Groups 2 and 3, it may be noted that participants in Group 1 had a higher mean SWEMWBS score at the start of the intervention and also tended to be older than the participants in the other two groups. Furthermore, participants in Group 3 experienced a different heritage environment (Avebury) and we do not know the impact of different Neolithic sites upon mental well-being. The substantial differences in SWEMWBS score from baseline to post-intervention

assessment in the study participants also highlights the fact that involvement in a creative exploration of the prehistoric landscape has had a significant positive impact upon their mental health well-being. Generally speaking, these findings are in line with earlier research (presented in the introduction) suggesting that nature and green treatments targeted at people with mental health problems could improve their mental health well-being (Rolls and Sutherland, 2014; Cipriani et al., 2017; Hosseinpoor Najjar et al. (2018)).

This was further supported by the qualitative data themes that emphasized reconnections between people and place. Discrimination against people living with mental illness is a significant issue; almost nine out of 10 people with a mental health problem report that they have experienced stigma and discrimination resulting in two-thirds of them stopping activities as a result of their experiences (Time to Change, 2008). This occurs through the internalisation of self-stigma resulting in lowered self-esteem and self-worth (Bhui, 2016). It perpetuates self-isolation thereby propagating a disconnection from the world that leads to a negative mental health spiral. This was evident in the qualitative data as the majority of participants expressed a disconnection from people due to a fear of stigma as evidenced in the theme “Being me”. Here they articulated feeling accepted in the group with the result that they felt more authentic when out in wider society.

There are links here to the concept of well-being. Todres and Galvin (2010, p. 5) drew on the work of Heidegger arguing that “well-being is both a way of being-in-the-world, as well as how this way of being-in-the-world is felt as an experience”. Considering the notion of connection described by participants in Human Henge which links to the recovery model of mental health, as connectedness is one of the five recovery processes (Leamy et al., 2011). In order to explore this we need to re-consider Duff’s (2012) ‘enabling’ places for people with mental illness. The first aspect of promoting recovery is through social resources. It is evident how Human Henge expanded the participants’ social resources, through increased social contacts with others living with a mental illness which not only provided a sense of acceptance but also a sense of community and belonging. This continued beyond the length of the programme with many of the participants across the three groups continuing their social engagement a year after the programme ended. Next are material resources, linked to expanding one’s horizon. Many of the participants in Human Henge had not really engaged with heritage or Neolithic landscapes and perceptions of inaccessibility of heritage are common for individuals who are socially isolated (Todd et al., 2017). The Neolithic environments of Stonehenge and Avebury were central to this, as there is a need to use one’s imagination regarding what life was like during these times as there are no absolute with this period of history. Not only did individual’s horizons reading history and creative aspects expand through the programme but so too, did their perceptions of themselves. The focus of the programme on them as individuals rather than their mental illness was really important as it enabled them to see their capabilities for growth and development even whilst living with a mental illness. This was apparent in many of the individuals as they either re-ignited lost passions or developed new ones such as poetry, photography or confidence to join or establish new mental health groups once the Human Henge programme finished. Central to developing both the social and material resources was the atmosphere created by the Human Henge group, linking to affective resources which are concerned with how individuals feel (Duff, 2012). As identified earlier, many individuals with a mental illness find themselves socially isolated through direct or perceived negative perceptions of them by others. This was apparent as many of the participants identified their fears at the start of the programme which were linked to meeting new people and being in a group setting. A key aspect of the Human Henge programme was that participants felt a sense of space both physically and emotionally. Space physically was provided through the landscape and psychologically, through no pressure to participate in activities. For example on a group walk, some individuals in the group walked together the whole time whilst felt free to spend some time in the

group and then some time walking alongside the group but alone. Bell et al. (2018) argues that a key aspect of the therapeutic space is the provision of opportunities for emotional refuge and non-demanding social interaction, presenting a 'home-like' atmosphere promoting belonging, security and comfort.

Interventions such as Human Henge support the international Mental Health Action Plan which aims to "promote mental well-being, prevent mental disorders, provide care, enhance recovery, promote human rights and reduce the mortality, morbidity and disability for persons with mental disorders" (WHO, 2013, p. 9). Two key objectives in this plan centre on the need to strengthen focus on promoting mental health and develop information and evidence about mental health (WHO, 2013). The world is rich in cultural heritage and archaeological sites so there are numerous possibilities of utilising historical landscapes to promote mental health. Mechanisms through which these could be developed and promoted include social prescribing. Social prescribing is described as a process of linking patients in primary care to support within their local community, offering non-medical referral options that can work alongside existing medical treatments to improve health and well-being (Bickerdike et al., 2017). As identified, it aligns well to the recovery model of mental health as it focusses on what is important for the individual (NHS England, 2019). In addition, the growing evidence base regarding the use of landscapes to promote health and wellbeing lends itself to social prescribing schemes (Todd et al., 2017), especially as they are ideally located within community settings and promote community cohesion. We argue that heritage interventions such as Human Henge also fit well within the social prescribing model as they include a holistic focus on individual's health needs, responding to the range of factors that contribute to ill health including social, economic, and environmental factors, as well as supporting individuals to take greater control of their own health (Kings Fund, 2017).

5. Strengths and limitations

A particular strength of the current study is that it has used heritage as an environmental tool for enhancing mental health well-being in a group of people with mental health problems. Data was collected prospectively using a validated robust measure that minimized the recall bias. Using a mixed-method approach enabled us to further assess the efficacy of the intervention in a more in-depth way. The study did have some limitations, especially the relatively small sample ($n = 35$) and the question of how representative it was. This inevitably limits its generalisability. The longitudinal nature of the study meant there was a high drop-off rate for the end of programme and one-year post intervention. At the baseline 33 participants completed the questionnaire, by mid-point and end of 10 week programme this had dropped to 30 participants, and by the one-year post intervention only 17 participants completed the questionnaire. Whilst there were statistically significant findings, caution must be exercised when explaining them. Moreover, this research did not explore individual mental health diagnoses and thus it is unknown whether individuals with specific mental health issues may find this style of programme more beneficial. Also because we did not explore additional therapy or support the participants received we acknowledge that wider factors may also have influenced the 1 year post intervention scores. Lastly, a potential critique of this study could be that heritage itself has little impact and that any group based activity could have produced similar results. Whilst the participants expressed that the heritage aspect of the Neolithic landscape was important, ultimately a randomised controlled cluster trial is needed to explore whether heritage based cultural therapy programmes have a greater impact upon well-being than other group based activity.

6. Conclusions

Research connected with the Human Henge programme offers an original contribution to the knowledge-based use of ancient monuments

and historic landscapes, Neolithic and Bronze Age sites in particular, as tools for improving mental health well-being in people with mental health issues. From the research it is evident that utilising archaeological landscapes in this way can have therapeutic benefits on mental health, and that the significance of these benefits is maintained over time. Further research is required in order to develop this work for wider application as a non-clinical approach to the promotion of mental health well-being. Large controlled trials, quasi or randomized, comparing standard medical care alongside standard medical care with heritage therapy using sites such as Stonehenge, Avebury, and similar sites could provide more evidence for the efficacy of using heritage places and associated immersive activities as an intervention. The efficacy of this approach linked to specific mental health issues could also be considered in future research.

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Declaration of competing interest

None.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.healthplace.2019.102273>.

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