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Clatworthy, J., Hinds, J. and Camic, Paul M. (2017) Exploring the relationship between suburban allotment gardening and wellbeing: An interpretative phenomenological analysis. *Ecopsychology*, 9 (3). pp. 121-129. ISSN 1942-9347.

Link to official URL (if available):

<https://doi.org/10.1089/eco.2016.0048>

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Keywords: Wellbeing; allotments; community gardens; hierarchy of needs, health promotion

Exploring the relationship between suburban allotment gardening and wellbeing: An interpretative phenomenological analysis

Abstract

Evidence suggests that gardening can have a positive impact on the health and wellbeing of people experiencing mental health difficulties. There is currently a lack of research exploring the potential public health benefits of gardening among non-clinical populations. Therefore the aims of this paper were to explore the relationship between allotment gardening and wellbeing from the suburban allotment-holder's perspective. Six suburban allotment gardeners were interviewed to elicit their personal experiences of allotment gardening and its impact on their wellbeing. Transcripts were subjected to Interpretative Phenomenological Analysis (IPA) with seven main themes emerging: fundamental importance of growing and valuing food; physical and mental protection; feeling connected to people, place and time; pride, mastery and control; pleasure of being in nature; problem solving, learning and accepting; acting on values. Parallels were drawn between these themes and psychological models of wellbeing and motivation. The research suggests that allotments are flexible environments that may enable people to meet a wide range of individual needs, enhancing wellbeing. They may be a particularly valuable resource for the promotion of wellbeing in urban and suburban areas, where people may feel detached from nature and a sense of community.

Keywords: Wellbeing; allotments; community gardens; hierarchy of needs, health promotion

Authors Disclosure Statement: No competing financial interests exist

Introduction

A growing body of evidence suggests that contact with natural environments is positively associated with health and wellbeing (Gilbert, 2016; Hartig, Mitchell, de Vries, & Frumkin, 2014; Mensah, Andres, Perera, & Roji, 2016). However, with the majority of the world's population now living in urban areas (World Health Organisation, 2016) and those in industrialised nations typically spending over 90% of their time indoors (Chalquist, 2009) there is concern that people are becoming disconnected from nature. One means of having contact with nature in urban environments is through gardening. While there is evidence to suggest that gardening can enhance health and wellbeing for people experiencing mental health difficulties (Clatworthy, Hinds, & Camic, 2013) there is a paucity of empirical research exploring the value of gardening in non-clinical populations (Partridge, 2010).

One specific gardening context which has seen a resurgence in recent years is allotment gardening, whereby people rent small patches of land to grow fruit and vegetables for personal consumption (Acton, 2011). A systematic review on the impact of allotment gardening concluded that it has the potential to enhance health and wellbeing through providing five things; a social network, a stress-relieving refuge, a healthier lifestyle, contact with nature and opportunities for personal development (Genter, Roberts, Richardson, & Sheaff, 2015). However, the review highlighted the lack of research in this area, with only ten relevant studies identified. Furthermore, almost all of the studies explored the experience of gardening in organised allotment-based groups (e.g. for people experiencing mental health problems, for refugees, for fathers) rather than the more common experience of gardening as an independent allotment holder. The researchers identified a need for further research into the public health potential of everyday allotment gardening. One subsequent study explored the relationship between allotment gardening and wellbeing through an online survey of 171 UK allotment gardeners (Webber, Hinds, & Camic, 2015). The findings indicated that time spent on the allotment is positively associated with eudemonic wellbeing (i.e. the extent to which an individual feels fulfilled, through self-development and meaning-finding) and that this

appears to be the result of increased connectedness to nature. A thematic analysis of responses to open-ended questions suggested that participants valued the space of their own, meaningful activity, increased feelings of connectedness and improved mental/ physical health. The aim of the current research was to build on these findings through an in-depth exploration of everyday allotment gardeners' experiences, drawing on psychological theory to deepen understanding of the relationship between allotment gardening and wellbeing.

Methods

Design

This qualitative study used in-depth semi-structured interviews to enable participants to provide detailed accounts of their allotment gardening experiences, which were then subjected to interpretative phenomenological analysis (IPA) (Smith, Flowers, & Larkin, 2009). This idiographic approach was selected as it allows in-depth exploration of how a small number of people make sense of their experiences – in this case their understanding of the relationship between their allotment gardening and their wellbeing. Participants were each interviewed on two occasions, approximately one month apart, as it was anticipated that the first interview would stimulate thought on the topic that could then be further elaborated upon. Ethics approval was granted by the Faculty of Social and Applied Sciences ethics panel at Canterbury Christ Church University.

Participants

Participants were six allotment gardeners with a minimum of one year's experience, recruited from two UK suburban allotment sites (Table 1). Each site had approximately 170 allotment plots, most of which were 125 square meters in size. While a few of the plots on each site were used by community groups (e.g. for ex-offenders, school groups) the vast

majority were held by individuals growing food and flowers for themselves/ their families. Allotment holders paid a small annual fee (approximately £40 for a standard sized plot) to the council for rent and water charges. Both allotment sites had a small trading hut selling gardening supplies, open for a few hours each week.

Interviews

For the first interview, a semi-structured interview schedule was developed to elicit allotment gardeners' personal experiences of allotment gardening and how they made sense of the relationship between gardening and wellbeing. Questions included "How did you come to be an allotment gardener?", "What does your allotment mean to you?", "How do you think your allotment gardening affects you?", although the schedule was used flexibly, guided by the responses of the participants. During the second interview, participants were talked through a preliminary analysis of their first interview and asked if they thought the themes captured their experience of allotment gardening. They were also given the opportunity to share any additional thoughts on the topic.

Procedure

Participants were recruited via posters and study information sessions at two allotment trading huts locations where allotment holders bought gardening supplies. There was the option of being interviewed on the allotment plot, in line with calls to develop experiential qualitative research that gets closer to the lived experience (Smith et al., 2009), or at home. Only one participant chose to be interviewed on the allotment.

Interviews were digitally recorded and transcribed verbatim. First interviews lasted approximately an hour (mean duration 57 minutes) and second interviews approximately forty-five minutes (mean duration 47 minutes).

Analysis

The interviews were subjected to Interpretative Phenomenological Analysis (IPA) (Smith et al. 2009). Each interview was initially listened to multiple times and transcribed verbatim, recording observations. As suggested by Smith et al. (2009), consideration was given to three levels of analysis when making initial notes - descriptive (describing what the participant has said), linguistic (consideration of the language used, such as the use of metaphor and the delivery of the speech) and conceptual (more interpretative analysis, hypothesising about deeper meaning). Themes that captured the essence of the notes were recorded and discussed with each participant in their second interview, which was transcribed and analysed in the same way as the first. For each participant, sections of their transcripts were then categorised under the corresponding themes. Patterns in themes became apparent during this process and they were grouped and renamed accordingly. In order to ensure that individual perspectives were fully taken into account when the group results were presented, a summary of each participant's personal allotment experience was written at this stage. Finally, the themes and corresponding sections of transcript for all participants were arranged together, to identify patterns across participants.

Quality Assurance

Prior to conducting the project, guidelines for conducting qualitative research were consulted (Elliott, Fischer, & Rennie, 1999; Smith et al., 2009; Williams & Morrow, 2009; Yardley, 2008) and a number of measures taken to support the validity of the work:

Bracketing. When conducting qualitative research it is important for the researcher to be aware of their own view of the topic and its potential influence on the research process (reflexivity): "It is not possible to view without viewing from somewhere. We do our best to become aware of what that somewhere is, questioning it, owning it or changing it, and including it in our reports" (Fischer, 2009, pg. 584). The lead researcher was herself an allotment gardener and was aware that she had knowledge and insight into the topic that

could both help her to understand and empathise with the experiences of the participants but could also potentially make her less open to views and experiences that differed from her own. In an effort to become more aware of her own position on allotment gardening and wellbeing, prior to beginning the research interviews, she was interviewed by a colleague using the same interview schedule to elicit both her personal views and the responses she anticipated from participants. She kept a diary of significant changes in her thinking on allotment gardening as her position evolved throughout the course of the project. For example, she found herself placing greater value on the allotment as a restorative environment following the interviews with other allotment holders and began to use the allotment more frequently (e.g. for work breaks).

Credibility check. Themes identified through the analysis of each participant's first interview were fed back to them in the second interview and their comments sought. None of the participants disagreed with a theme that had been identified. However, during the second interview, participants often expanded on the themes identified in their first interview and occasionally new themes emerged.

Independent data audit. Each stage of the analysis was systematically recorded and filed. The records and a coded transcript were sent to the second and third authors, both of whom had extensive experience of IPA. Given the interpretative nature of the approach, it would be inappropriate to expect different researchers to identify identical themes in the data. Instead, with an IPA data audit, the emphasis is on whether the research offers a plausible interpretation of the data. Both the second and third authors were satisfied that the interpretation of the data and the conclusions drawn were credible.

Results and discussion

Overview of Themes and Idiographic Consideration

Seven main themes emerged from the data: fundamental importance of growing and valuing food; physical and mental protection; feeling connected to people, place and time; pride, mastery and control; pleasure of being in nature; problem solving, learning and accepting; acting on values. While all participants spoke to some extent to all of the themes, each appeared to have a different emphasis. It was clear that the allotment gardening experience meant something different to each of the participants. Summaries of the dominant themes for each participant are presented in Table 1.

INSERT TABLE 1 HERE

Theme 1: Fundamental importance of growing and valuing food

All participants described a satisfaction in being able to meet the basic need of providing food, as described by Ann, “You’re going back to basics aren’t you with gardening ... if you’ve not got food then nothing else happens does it?”.

While all acknowledged that food was now readily available and affordable in the shops, negating the necessity to grow it, the older participants spoke of times during their childhoods in post-war Britain when concerns over having enough food were more salient. However, the product of allotment gardening remained extremely important to all participants (e.g. participants described the unusual varieties of vegetables they were growing and commented on the superior quality and freshness of their produce). Several participants felt that allotment gardening had changed their relationship with food. As Clare said, “It makes me think more carefully about food”.

Theme 2: Physical and mental protection

Protecting the mind. All of the participants believed that the allotment could help to reduce mental distress. Often the allotment environment was positioned in contrast to the real world pressures faced by the participants, particularly at work. For example, Alan described how he had worked for many years in an extremely high-pressure job and repeatedly referred to the allotment as a “safety valve” that allowed the pressure to escape. This use of language implied that the allotment protected Alan from potentially catastrophic consequences of work stress.

Two key mechanisms for reducing stress were described. The first, reported by all participants, was the calming quality of a repetitive task such as weeding, described here by Ann:

You're just concentrating on one simple task, which is pulling out a weed, out of the ground. You're watching what you're doing obviously 'cos otherwise you could pull up your plants as well as your weeds and the total concentration is on that so your mind is clear ... you're not thinking “Oh I must do this, I must do that” - you're just doing that.

This deliberate focus of attention on a task in the present moment is a key component of mindfulness based cognitive therapy, a recommended intervention in the prevention of recurrent depression (NICE, 2009). Mindfulness-based interventions have also been found to reduce stress in non-clinical samples (Chiesa & Serretti, 2009).

Denise and John also reported that they felt the physical exercise could help prevent or treat mental distress. For example, John said, “I seriously believe that physical exercise is good for relieving stress and depression”. There is considerable evidence that physical exercise can be helpful in the prevention and treatment of common mental health difficulties (Dunn & Jewell, 2010; NICE, 2009).

Protecting the body. All participants acknowledged the physical benefits of the exercise undertaken through allotment gardening. For one participant, Denise, the desire to give up her gym membership and seek a more pleasant form of exercise was a key factor in her decision to apply for an allotment. For most, however, exercise was not central to their motivation to garden, rather it was viewed as a positive by-product. Kingsley et al. (2009) also reported that physical exercise was not as important to gardeners as anticipated.

Sanctuary. For one participant, Vanessa, who had experienced considerable emotional distress in recent years, there was a strong sub-theme of the allotment being a safe place of retreat:

It's a place of escape and I suppose that's the biggest thing. It's a place to escape to when you're not feeling a hundred per cent ... it's very quiet, it's very calming and very de-stressing, it's quite a sanctuary.

While other allotment holders did not directly refer to the allotment as a sanctuary, it was often positioned as an alternative to some of the difficulties of the outside world, implying it had a role as a safe place of escape.

Theme 3: Feeling connected to people, place and time

Connected to others. Positive relationships with others/ relatedness are key components of psychological models of wellbeing (Deci & Ryan, 2000; Ryff, 1989). All participants acknowledged the social opportunities offered by the allotment. As described by Alan, growing vegetables provided a safe 'common ground' from which to initiate relationships:

There's quite a social side to it as well, in a gentle way....you've always got a topic to talk about, you've always got the allotment – what's going on, what you're doing and so on - and then it spreads to other topics as well.

Alan and John described how suburbia could be a very lonely place, making the allotment community a particularly valuable social resource in these areas. As John explained:

I think it's of paramount importance that people feel that they belong to a place and suburbia is a very easy place not to belong to anybody ... you can get the bus without speaking to anybody, you can go to the supermarket and not speak to anybody and you can be a very lonely person in suburbia ... that's what the soil out there offers - everybody has a shared interest in making stuff grow.

There was recognition that allotments may provide an opportunity for people to interact with those who they may not come into contact with through other social circles and that this might produce learning opportunities. For example, Denise stated, "You meet people you wouldn't necessarily meet in normal life – it sort of broadens your experience of who you talk to...everyone has their own outlook and it's just interesting to hear what other people think". Differences discussed during the interviews included ethnicity, gender, age, type of job and criminal offending history (one of the sites included a plot worked by offenders). Drawing on social psychology theories, the conditions of contact provided at an allotment (e.g. common goals and values, sustained regular contact, opportunities to self-disclose), would appear conducive to enhancing social inclusion and cohesion amongst groups who perceive themselves to be different (Abrams, 2010; Moored, 2006; Shinew, Glover, & Parry, 2004).

Connected to the past. All participants reported a family history of gardening and/ or childhood memories of growing and the experience of allotment gardening appeared to serve a function in rooting them within their family tradition. As Ann reported, "How did I become to be an allotment gardener? Well, my father had one, my grandfather had one ... everybody had one ... I can't think of anybody that I know who didn't have an allotment".

Research suggests that childhood experiences of natural environments predict later affiliation and engagement with nature (Hinds & Sparks, 2008).

Connected to the earth. In addition to feeling connected to people, past and present, there was a broader sense of connection to the planet that came across in the interviews. The biophilia hypothesis suggests that having evolved within natural environments, humans have an innate need to affiliate with nature (Wilson, 1984). As Alan said, “It’s a place where you feel – it’s hard to say – sort of like attached to the earth”. He clearly got great pleasure from feeling connected to nature:

You’ve got a very tame robin down there It’s actually perched on my shoe at one time! And you see that and the pleasure that you get from seeing something that’s wild so close to you and sort of being able to accept you ... [I get] tremendous pleasure with that.

The allotment also appeared to give participants a greater sense of both their role and responsibility as a person on the planet, and also their dependency on other organisms (e.g. needing bees for pollination). John said, “You see where you fit in as a human being into the whole picture”. There is a growing ecopsychology movement in Europe, based on the principle that this human connection to the earth is vital, both for the wellbeing of individuals and the survival of the planet (see Burls, 2007). Furthermore, recent quantitative research found that connectedness to nature mediated the positive relationship between time spent on the allotment and eudemonic wellbeing (Webber et al., 2015).

Theme 4: Pride, mastery and control

Pride in the produce. All participants were proud of the vegetables that they had grown. For example Clare expressed real excitement about her gardening successes, “I dug up my first potatoes ever and I was just like a child – I was jumping around going ‘I’ve grown potatoes!’”. Participants were particularly pleased to be able to share their produce and get approval from others, as Ann described:

It's a thing I'm proud of – that I've produced food – that I've produced things – and you can give stuff away ... I've got quite a few little ladies that can't grow things themselves and they love it when it's runner bean time!

Pride in elite group membership. There was a sense from all participants that they were proud to have demonstrated that they could 'cut it' as an allotment gardener. This was particularly evident when participants were asked how they thought others would perceive their allotment gardening. For example Clare said, "I think they're quite impressed that I actually do it, that I manage to do it".

Being able to succeed as an allotment gardener represented much more than simply having gardening skills. Participants described essential characteristics such as being patient, hard-working, committed and tolerant. Many had witnessed others who had taken on allotments and not succeeded. As John said, "They come here, they can't do the work, they find it bloody hard, the plot gets a mess, they get an unworked plot letter and off they go". Social comparison theories suggest that people enhance their self-esteem through comparison with those who are less successful (Suls & Wheeler, 2012). Through allotment gardening, participants appeared to achieve a sense of 'competence' and 'environmental mastery', key components of theories of wellbeing (Deci & Ryan, 2000; Ryff, 1989).

Transferable skills/ role replacement. The allotment appeared to give participants a flexible opportunity to use their existing personal and professional qualities, maintaining roles and status. This was particularly salient for those who had retired. It was surprising to hear from participants how many transferable skills they brought to the allotment. For example, John, a former teacher, held educational events on organic farming methods at the allotment.

Autonomy. A sense of control and autonomy over the allotment experience appeared to be extremely important to all participants. On one level there was control over the use of the land, as explained by Vanessa:

It's your own little piece of land - even though it belongs to the council - it's your own little piece of land that you can do what you like with and grow what you like ...you're just free to do what you want to do.

Participants also had control over how they chose to spend their time on the allotment. For Denise and Alan, who had both retired from jobs in which they were under pressure to meet external deadlines, this freedom presented quite a contrast, as explained by Denise, "In [work] you're always on deadlines and there was pressure to hit those deadlines – on the allotment I'm entirely my own boss – if I don't plant it today, it doesn't matter".

The allotment environment also gave participants some control over social contact and relationships. Vanessa described how by adjusting the time of visiting the allotment she could get as much or as little social contact as she wanted:

You can be with people if you want to, depending on the time of day that you go, or if you just want a bit of peace and quiet, go over there in the evening and you can just be lost over there.

The importance of autonomy as an aspect of wellbeing is well-recognised in the literature (Deci & Ryan, 2000; Ryff & Singer, 2008).

Theme 5: Pleasure of being in nature

All participants indicated that they benefited from the hedonic feel-good factor of being outside in nature, which often appeared difficult to fully explain. For example, Clare said, "It's just nice to be outside". The allotment was perceived to be a particularly valuable resource in suburbia, as it provided easy access to a natural environment. Both Ann and Vanessa reported that they were "addicted" to the allotment, perhaps indicating a dependence on being outside in nature. Vanessa described how she would use the allotment as a 'pick me up' after work:

I could come home from work feeling like I just want to go to bed and I think “No – I’ll go over the allotment” and it’s quite rejuvenating and very refreshing. And I’ll come back thinking I am tired but not in the same way as I was...it is sort of like a booster.

This lends support to attention restoration theory (Kaplan, 1995), which is grounded in experimental evidence that spending time in nature can improve attention and concentration.

Theme 6: Problem solving, learning and accepting

Problem solving and continued learning. All participants talked about the challenges of allotment gardening (e.g. coping with weather, pests and diseases) and the need to problem-solve situations that arose and learn from mistakes, as described by Clare, “You just have to go “Okay, did I do something wrong – did I not prune properly, did I water at the wrong time?””.

Acceptance. Across all participants there was evidence of an attitude of acceptance when things did not go to plan on the allotment. This was considered to be an essential quality of an allotment gardener, as illustrated by Alan:

You do one thing and you think “Oh those cabbage plants are growing very nicely” and suddenly pigeons go on them and within 24 hours they’re gone! There’s just bare stalks standing up in there. You’ve got to be prepared to accept that – “Oh blow”.

Acceptance is increasingly being recognised as an important psychological concept, central to contemporary third wave cognitive behavioural therapies such as mindfulness based cognitive therapy and acceptance and commitment therapy (Herbert, Forman, & England, 2009). Allotment gardening provides regular experiential opportunities to practice acceptance.

Theme 7: Acting on values

Helping the environment. With the exception of Alan, all participants described how the allotment fitted with their 'green' values. These included the importance of growing organic, local food and recycling materials. For example, Denise said:

Allotments are very green – cos you know we use everything – plastic bottles that we have here I take them down there to cover seedlings ...So it's a very recycling friendly environment.

Helping others. All participants voiced dissatisfaction with elements of current society. There was a belief that communities had broken down, and that people were becoming increasingly individualistic. The strength of this theme may reflect the timing of the interviews, immediately after a period of rioting and looting in the local area, which had highlighted social problems. Participants felt that the allotment environment supported alternative values that could benefit society. While this theme was present in all of the interviews, John's interviews stood out as being dominated by ideas about developing the local community through the allotment. It is well documented that helping others through community work can enhance well-being (Thoits & Hewitt, 2001).

Parallels with Maslow's Hierarchy of Needs

During the analysis, parallels between the emerging themes and Maslow's (1968) hierarchy of needs theory became apparent. Maslow's theory of motivation originally comprised five needs (physiological, safety, love/ belonging, esteem and self-actualisation) (Maslow, 1968) but he later described aesthetic needs, cognitive needs and self-transcendence, which are now often incorporated into the hierarchy (Koltko-Rivera, 2006; Ward & Lasen, 2009). The perceived links between the themes identified in this study and Maslow's extended hierarchy are displayed in Table 2. The results of this study suggest that suburban allotments are flexible environments that provide opportunities for people to meet the needs that are the focus of their motivation at any given time, from basic food needs through to opportunities for self-transcendence.

INSERT TABLE 2 HERE

Conclusion

For the six allotment-holders interviewed, allotment gardening was perceived to enhance wellbeing, both from a hedonic perspective (e.g. the pleasure of contact with nature) and a eudemonic perspective (e.g. leading a more fulfilled life through continued learning, helping others, autonomy).

Previous research had identified various beneficial aspects of allotment gardening (e.g. connection with nature, improved physical health), yet had not applied psychological theory to help further understanding of the relationship between gardening and wellbeing. Furthermore, existing research had primarily taken a nomothetic approach, forming generalisations about the benefits of gardening. The methodology used in this study enabled a more idiographic exploration, revealing that while there were common themes across all participants, the relative importance of the themes differed greatly between individuals. This could be understood using Maslow's hierarchy of needs, with the allotment being a flexible environment that provided opportunities for the participants to meet their own personal needs in order to achieve greater wellbeing.

It is important to recognise that the experiences described by the allotment gardeners were not all positive or idealised. Indeed all participants described battling with adversity such as pest infestations and extreme weather on their plots. However, the challenge of coping with or overcoming these difficulties appeared to be important to their wellbeing, reflected in the themes problem solving, learning and accepting and pride, mastery and control.

The small sample size of this study was crucial for enabling an in-depth exploration of the personal experiences of the participants. However, as with all small-sample research, caution needs to be exercised when generalising from the study findings. It would not be

appropriate to conclude that everyone's wellbeing would be enhanced if they had an allotment. All of the participants had a long-standing interest in gardening and were relatively successful allotment gardeners, maintaining their allotments for at least a year. Furthermore, while many of the participants talked about cultural diversity on their allotment site, the sample drawn was not very diverse, comprising solely white, middle-class allotment-holders.

Despite these limitations, given the current emphasis on promotion of good mental health in both public health and mental health strategies (Department of Health, 2010, 2011; Mental Health Taskforce, 2016), allotments may be an important resource to enable people to flexibly enhance their wellbeing on a number of levels. They may be particularly valuable in urban and suburban environments, where people may feel disconnected from both nature and a sense of community. The amount of time required to sustain an allotment may prevent some people from accessing this resource, as may long waiting lists in some areas. This has implications for community health promotion interventions to enable people to engage in social gardening in a more supported way (e.g. sharing a plot).

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Table 1: Details of the study participants and their dominant themes

Participant name	Ethnicity/ Age	Years of allotment experience	Dominant themes	Example quote
Adam	White British/ 60s	40	PLEASURE OF BEING IN NATURE PHYSICAL AND MENTAL PROTECTION	<i>“To have nature going on around plants, animals, birds and so on great pleasure from that”</i>
Ben	White British/ 60s	14	ACTING ON VALUES	<i>“We have a particular philosophy and the allotment enables us develop that”</i>
Chris	White British/ 60s	18	PRIDE, MASTERY AND CONTROL	<i>“Not being big-headed, but I think a lot of people are jealous because they don’t have the stamina to be to do it themselves”</i>
David	White British/ 40s	2	PRIDE, MASTERY AND CONTROL FEELING CONNECTED TO PEOPLE PLACE AND TIME	<i>“I enjoy going there – it makes me better about myself”</i>
Emma	White British/ 40s	3	PHYSICAL AND MENTAL PROTECTION FEELING CONNECTED TO PEOPLE PLACE AND TIME	<i>“It’s pure escapism over there... of a sanctuary I suppose”</i>
George	White Northern Irish/ 60s	1	PROBLEM SOLVING, LEARNING AND ACCEPTING PRIDE, MASTERY AND CONTROL	<i>“Now I’ve retired... you’ve lost identity as someone who work and you have to kind of acquire one, so I suppose having the all</i>

Table 2: Themes identified in the data: Parallels with Maslow's hierarchy of needs

Themes	Maslow's hierarchy
7. ACTING ON VALUES	Self-transcendence
6. PROBLEM SOLVING, LEARNING AND ACCEPTING	Self-Actualization (incorporating Cognitive)
5. PLEASURE OF BEING IN NATURE	Aesthetic
4. PRIDE, MASTERY AND CONTROL	Esteem
3. FEELING CONNECTED TO PEOPLE, PLACE AND TIME	Belonging and Love
2. PHYSICAL AND MENTAL PROTECTION	Safety
1. FUNDAMENTAL IMPORTANCE OF GROWING AND VALUING FOOD	Physiological