Project-based Serious Leisure in Adventure Sports: Diggers not duffers – a case study of cavers aged 65 and over

by

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A thesis submitted in partial fulfilment for the requirements for the degree of MA (by Research) at the University of Central Lancashire

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STUDENT DECLARATION FORM

University of Central Lancashire

Type of Award **MA (by Research)**
School **School of Sport and Wellbeing**

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I declare that while registered as a candidate for the research degree, I have not been a registered candidate or enrolled student for another award of the University or other academic or professional institution

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Abstract

There are currently in excess of ten million people aged 65+ in the United Kingdom, with the number predicted to almost double to 19 million by 2050 (Cracknell, 2010). This equates to an increase of one-in-four of the UK population aged 65+ compared to one-in-six currently (Rutherford, 2012). There has been much concern about the consequences of an ageing population on health care systems and an emphasis on health and wellbeing to help older adults age well. Research suggests that leisure activities play an important role for older adults and successful ageing (Menec, 2003; Nimrod, 2007; Payne, Mowen & Montoro-Rodriguez, 2006). Boyes (2013) highlighted the multi-dimensional benefits of *outdoor adventure* activities and successful ageing, in particular, the physical, social and psychological gains that can be afforded by such activities. The aim of this investigation was to identify how caving is perceived by a small group of older adult males, an often marginalised and hard to reach group. The exploratory nature of the work was to determine the value of any deeper research in this direction and its potential worth to both theory and practice. The project used a small convenience and purposive sample (Mason, 2002; Patton, 2002). Questionnaires and semi-structured interviews were conducted with adult male cavers (n=4), aged between 65 – 74, from the North of England. Themes were identified through manual handling data analysis with internal and external checking throughout. Five key themes emerged: Adventure; risk; identity; serious leisure and managing health related adversity and in order to afford the work critical value, only the latter two were selected for inclusion in this work. Whilst this study indicates the need for further research, it also highlights the benefits of caving in active aging, supporting Boyes' (2013) notion that adventure sports are

mentally and physically challenging, enable social interaction and engagement with the natural environment.

Key words: adventure, health, identity, risk, serious leisure.

Acknowledgments

This research project would not have been possible without the unwavering inspiration, support and guidance from Dr Mark Hickman. It is this encouragement that provided me with the self-confidence and belief that I could undertake this post graduate study from the start and throughout the whole process. I now fully appreciate the value of exploring ideas and reconnaissance prior to registration and thank Dr Hickman for his patience and support whilst I tried on a number of pairs of shoes and decided on the direction of travel!

I would also like to thank the cavers who gave up their time to complete questionnaires and interviews, in order to assist me with the research process, particularly when this consumes precious digging time! In addition, I would like to thank all those cavers I have met over the last 30+ years, for the experiences, inspiration, exploration and above all companionship.

Finally, I would like to express my heartfelt thanks to my family, and in particular my husband and daughter who have been incredibly understanding, patient and supportive throughout this project.

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List of Abbreviations

AHOEC	Association of the Heads of Outdoor Education Centres
AMI	Association of Mountaineering Instructors
BC	British Canoeing
BCA	British Caving Association
BSG	British Society of Gerontology
CAQDAS	Computer Assisted Qualitative Data Analysis System
CIC	Cave Instructor Certificate
CF's	Critical Friends
CNCC	Council of Northern Caving Clubs
DVR	Digital Voice Recorder
IOL	Institute of Outdoor Learning
LR	Literature Review
MTUK	Mountain Training United Kingdom
MTA	Mountain Training Association
NCA	Nature Challenge Activities
NGB	National Governing Body
OECD	Organization for Economic Cooperation and Development
ONS	Office for National Statistics
PYB	Plas y Brenin, The National Mountain Sports Centre
RDT	Research Degree Tutor
UCLan	University of Central Lancashire
UIMLA	Union of International Mountain Leader Association
UK	United Kingdom

CHAPTER ONE – Introduction

1.0 Introduction

This chapter will provide an outline of the research project, the background and development of the idea, the subject matter, research aims and an overview of the research project structure.

1.1 Background to the Research Project

As a novice researcher, time spent in reconnaissance prior to enrolling on a post graduate study is invaluable as it allows time for the evolution and development of ideas without the added time pressure that exists once you have registered for a programme of study. I spent approx. 12 months planning this project before registering on the programme and this preparation undoubtedly helped me in identifying the direction of the study, to allow sufficient critical depth, and to remain within the scale and scope of this research project at Level 7.

For me, the preparation and decision making process was similar to buying a new pair of shoes, in that, much to my husband's exasperation, when shopping, my preference is to visit many different shops and try on lots of pair of shoes to see which one fits best before committing to a particular pair of shoes and purchasing them. When deciding on shoes, I need to be absolutely certain that I have chosen the right pair and that they fit well. This analogy I can also apply to my research project, in that it was necessary for me to explore many ideas in the beginning, give each idea considerable thought (like trying on and walking around in new shoes) before deciding on the right one. At the start of this journey, I was fortunate to have the opportunity to present one such idea to the Research Degree Tutor (RDT) within the School of Sport and Wellbeing which proved to be invaluable in

ruling out one possible route. This process and the critical feedback received enabled me to come to a decision about the direction of my research. See Appendix 1 (122), for an example of the slides used for this presentation.

My passion for exploring caves and mines began at the age of sixteen following a caving trip in the Mendips with my local Venture Scout group, some thirty years ago. Since then, my love of caves and my work within Outdoor Education has enabled me to continue to explore the unique and fascinating underground world and share my passion and enthusiasm with others, young and old. As a caver with experience of exploring mines and caves all over the UK, both professionally (as a Cave Instructor) and as a recreational caver, I have come into contact with cavers of all ages and abilities. It is because of my passion for exploring and leading others underground and through my membership of two caving clubs and the North Wales Cave Rescue Team, that I have become aware, and frankly in awe of 'older cavers' still actively involved in caving and mining, and at the 'cutting edge' or 'front-line' of cave exploration. Inspired by the continued enthusiasm shown by these older cavers and intrigued by their stories of digging for new passages and caves, I was thrilled to be invited on a 'meet' to see for myself how these older cavers are truly venturing into unknown territory – both physically (in the cave environment) and conceptually (in terms of the ageing process). This interest has motivated me to better understand the caving community of which I am a member, and to undertake a research project that is informed by my experience, observations and practise-based values, personally and professionally. Whilst the literature on ageing is broad, little exists specifically on how the process or state of ageing is perceived and experienced by older adult cavers, and what role 'caving' plays in this process.

In my full time role at UCLan, I became aware of the ongoing research into active ageing and outdoor adventure sports by colleagues within the Faculty of Health and Wellbeing. Research investigating the perceptions of older rock climbers (Hickman, 2015) and sea kayakers (Hickman et al, 2016) was already underway, and I felt delighted and privileged that this study of older cavers could add to this expanding body of knowledge of the relationship between active ageing and outdoor adventure sports.

As a member of staff within the School of Sport and Wellbeing at UCLan, which provides undergraduate programmes in Outdoor Adventure Leadership, this research will not only enhance my professional development but will also contribute to the training, education and continued professional development of future leaders of adventurous activities. By increasing the body of knowledge and awareness in this area, UCLan's undergraduates will be better informed and prepared for employment in the industry which will in turn benefit the growing 'older' client base whom they are likely to work with in the future.

Since the last time I carried out any academic research was over 25 years ago, I also felt that in order to offer support and guidance to students undertaking research in outdoor adventure sports today, I needed to update my research skills and knowledge of the research process. Throughout the research process, I kept a reflective journal (see Appendix 2: 123) in order to record and illustrate any development in my conceptualisation and skills as a novice researcher. I also met with my Director of Studies at regular intervals throughout the research project, to discuss progress and to set realistic targets with specific tasks for me to complete before the next meeting (see Appendix 3: 124). With my Director of Studies approval, I also recorded the conversations that took place during these

tutorials on a digital voice recorder, and this proved to be invaluable to me, as I could replay these conversations again at a later date, and it avoided the additional stress of frantic note taking during our valuable tutorial time.

1.2 The Subject Matter

At the time of writing there are in excess of 10 million people aged over 65 in the UK with the number predicted to rise to 19 million by 2050. Currently, one-in-six of the UK population is aged 65+, a figure expected to rise to one-in-four by 2050 (Rutherford, 2012). Dytchwald and Flower (1989) coined the term 'age wave' to describe the wave-like movement through western societies of the 'baby boomer generation', or those born between 1945 and 1964, whom are now reaching retirement age. Active ageing is defined by the World Health Organisation (2002:12) as "the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age". Much research has documented that 'A*ctive Ageing'* impacts positively on well-being, fitness and health (Grant & Kluge, 2012), but limited research exists on the benefits of outdoor adventure activities for older adults and in particular, the underground activities of caving and mining. Of relevance to this study, is Buckley's (2018) analysis of the benefits of 'adventure outdoor nature sports' to older participants. Not only does Buckley's (2018) work highlight the confusing, and essentially contested and non-consensual nature of the terminology surrounding such activities, the findings of this study also suggest that the opportunity for euphoria as well as physical exercise is of particular significance. Buckley (2018) claims that this euphoria provides positive mental health, allowing participants to temporarily overcome chronic pain and the psychological stress associated with ageing and major life transitions. Psychological benefits resulting from self-led

adventures undertaken in natural outdoor environments have also been documented by Brymer and Schweitzer (2013) and Clough et al (2016). Undertaking activities within the natural environment provides opportunities for participants to manage and overcome environmental challenges. Clough et al (2016) suggest that the positive effect of successfully overcoming challenges within the natural environment enhances feelings of competence, so increasing self-efficacy and psychological well-being. Self-efficacy is important as it may "affect whether individuals think optimistically or pessimistically, in self-enhancing or self-debilitating ways" (Badura, 2016:170). Self-efficacy beliefs and feelings of worth can impact on personal goals and aspirations, motivation and perseverance in the face of adversity, which it could be argued are crucially important for participation in outdoor adventure sports. This research project will investigate further the benefits of outdoor adventure sports, specifically the perceptions of the role of caving for older participants in the ageing process.

In an attempt to define and differentiate the way in which people use their 'free' time today, the concept of 'serious leisure' (Stebbins, 1992; Stebbins, 2014; Stebbins, 2015), has been used to describe three types of leisure activity, common in everyday life: amateur pursuits (such as art, science, sport and entertainment), hobbyist activities (such as collectors, makers, tinkerers, non-competitive activities such as fishing, sports / games such as frisbee) and career volunteering (in either an informal or formal setting). Of relevance to this study, Stebbins (2009:15) uses the term 'Nature Challenge Activities' (NCA) to describe those serious leisure activities undertaken in natural settings in which the focus is on meeting a challenge "posed by one or more of these six elements: 1) air, 2) water, 3) land, 4) animals (including birds and fish), 5) plants, and 6) ice or snow".

Stebbins (2009:17) suggests that NCA's contribute to participants' physical fitness and "offer greater scope for human agency than many other kinds of leisure activity". This study will support the notion that participating in a 'nature challenge' activity (caving) within a project-based 'serious leisure' framework enables sustainability of effort and commitment to that activity.

Unlike artificial or human-made settings, the natural environment is unstable and constantly changing, and it is this persistent variability and need to predict and adapt to dynamic changing environmental conditions (weather / terrain / water levels etc) which provides the attraction for many outdoor adventure sport / 'NCA' enthusiasts. The term 'adventure' can be contested, yet is commonly defined by the notion of **uncertainty of outcome** (Hopkins & Putnam, 1993; Mortlock, 1984; Priest, 1999), whilst for others, such as Wurdinger (1997), risk is a distinguishing factor. There are many factors of risk (including physical, psychological, social, cultural and economic) that may be experienced over the life course and which can be associated with most activities, and for many it could be argued that it's during the latter years when they may be more susceptible. Although risk is commonly associated with 'adventure' sports, which take place in dynamic and unstable environments, these risks can be offset with training, experience, equipment and safety precautions. As Stebbins (2005) points out, this can also ameliorate many of the objective hazards associated with adventure sports and reduce the perception of risk being undertaken by participants. By providing older adults with the opportunities for adventure sports, this study will show how caving is enabling a small group of older adults manage some of the risks encountered by the ageing process. See Figure 1(8), for a conceptual diagram illustrating the concepts of risk across the life course and the relationship with adventure and risk.

This study will further explore how older cavers are *physically* venturing into unknown territory with the uncertainty of what lies beyond, and the perceived high risk of collapse, rockfall, flooding etc, as well as *conceptually exploring the unknown* in terms of experiencing the ageing process. In many outdoor adventure sports, including caving, participants are very much reliant on each other as they venture into completely unfamiliar territory. This results in enhanced social bonds between participants, and together with the attraction of uncertainty and danger, there is a shared sense of achievement and reward when goals are met. This case study will show that this is just one of the ways in which caving is helping older adults cope with the ageing process.

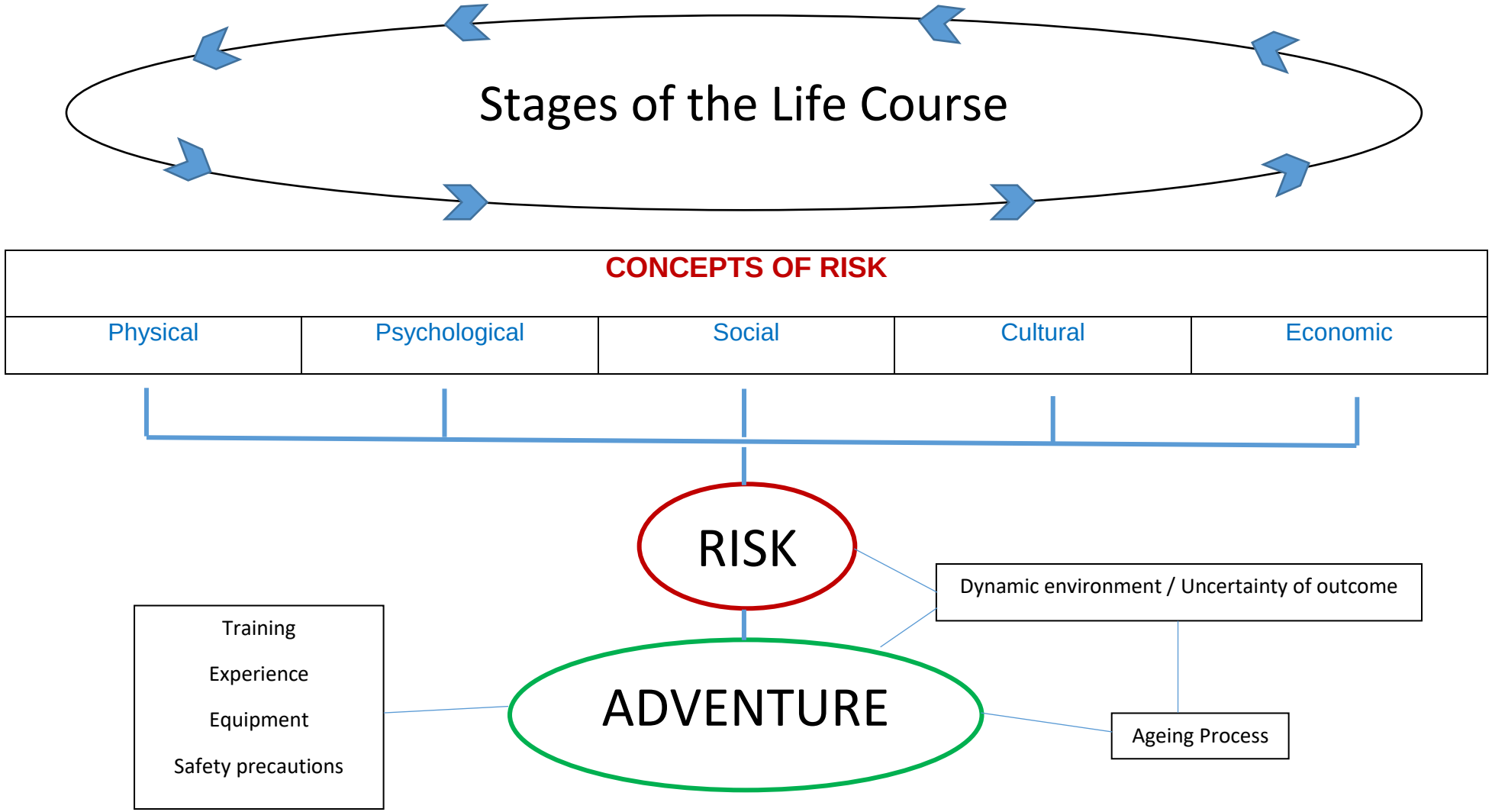


Figure 1: Concepts of Risk Across the Life Course and Relationship to Risk and Adventure

This case study will further support the notion of the ‘extrusion’ of an experience, whereby any given experience is re-told, re-shaped and re-imagined beyond the boundaries of the event itself, as illustrated by the work of Hickman et al (2016). The physical experience might have fixed and immutable time-space co-ordinates but the social and psychological experience extends much further - essentially in free time when the team is not physically caving it retains the capacity to continue experiencing the activity. Thus for this group of cavers, a bridge between the past event and future digging is established.

This further posits the study within a health and well-being framework which can be additionally supported by the work of Wenger, McDermott and Snyder (2002). This work has three components: a *domain*, or shared identity; a *community*, which engages in shared activities, offer mutual help and assistance and share ideas and information; and, a *practice*, with shared resources (ideas, tools, problem-solving strategies) that are developed over time. Wenger, McDermott and Snyder (2002) suggest that engagement in such communities of practice helps in the construction of identity, motivates learning and the development of skills, and creates and enhances social bonds.

This research project provides the opportunity to examine a pertinent and current issue within the ‘Active Ageing’ and wellbeing agenda. As described previously, it will also contribute to the body of knowledge and research already taking place within The University of Central Lancashire’s (UCLan)’s School of Health and Wellbeing in active ageing and adventure sports, which is an area lacking in research, nationally and internationally within the outdoor sector.

This research will contribute to the training, education and continued professional development of practitioners and future leaders of adventurous activities. As part of my dissemination strategy, the findings of this study will also be shared with the outdoor professional bodies through the relevant professional journals, presentations at a range of conferences as well as publications in caving specific magazines / journals and caving club newsletters and events.

1.3 The Research Aims

Postgraduates are advised that convincingly addressing smaller and more manageable aims is better than leaving more numerous or larger aims unconvincingly addressed (Biggam, 2011; Wallman, 2011; Furseth & Everett, 2013). As a novice researcher, I followed the advice from Bell and Newby (1977) not to be too ambitious with my aims, but to data cap the work (Hefferon & Gill-Rodriguez, 2011) to make the project more manageable. Data capping can be applied to several elements of the research including the aims, size of sample and questions asked, in order to provide the novice researcher with the opportunity to concentrate more effectively on the research process rather than be overwhelmed with tasks or volume of data. Therefore, after careful consideration, the aims of this project (identified in Feb 2016) are to:

1. Develop my skills as a researcher and my knowledge of the research process in order to support students that I interact with more effectively.
2. Make a contribution to theory through establishing a platform to understand ways that older adults conceptualise mining.
3. Make a contribution to practice knowledge through understanding ways in which this impacts on vocational employment.

In mountaineering, a range of navigational tools are employed to identify exact positioning at all times. One of these tools is called the '*handrail'* as it allows a navigator to use a fixed feature to steer their direction. In this research project, I will include a handrail to help steer the direction for the reader / assessor. In each chapter (either at the start or at the end) there will be a clear and identified exposition of how the aims will/have been met. In the same way that a handrail leads the navigator to their destination in mountain navigation, the handrails used in this study should lead the assessor quite precisely to the Conclusion where only a brief evaluation of the aims will then be necessary. From the researcher's perspective, creating the handrail has been an extremely useful tool allowing me to constantly review and check that the 'location' made sense and has kept the writing focused and relevant.

1.4 Overview of the Research Programme:

Chapter Two reviews some of the literature pertinent to the aims outlined above. The literature on ageing and 'active ageing' is broad; therefore, careful consideration regarding the selection of resources and material to be included in this project was required.

Chapter Three describes the research design underpinning this project, exploring the philosophical platform for the project and considering my ontological and epistemological views. This chapter will also provide a justification for the methods used for sampling, data collection and data analysis, highlighting any concerns in the process.

Chapter Four provides the findings of the study, which is followed by the discussion in Chapter Five, which will be related back to the literature provided in Chapter Two.

The conclusion is presented in Chapter Six, which will examine whether the aims of the project have been met, along with any recommendations to extend the study and any suggested improvements. The conclusion will also examine what I have learnt both as a researcher and about the research process as a post graduate MA(Res) student. My dissemination strategy will illustrate how my findings will be shared internally (within UCLan) and externally – within academia and professional practise.

The table overleaf shows the structure of this research project by chapters, as perceived in February 2016, and in short reflects a strategy to allow for *the systematic identification, acquisition, analysis, representation, discussion and management of both primary and secondary data* (Miles & Huberman, 1994).

Chapter	Constituent Parts							
1.Introduction	Introduce Topic	Rationale	Aims	Relationship Diagram	Scale and Scope	Value	Breakdown and Structure	Summary
2.Literature Review	Academic Content: Journals, books.				Practice Knowledge: Professional journals, Govt, NGO.			
3.Methodology	Philosophy	Ontology and Epistemology	Approach: Quantitative or Qualitative	Resources	Methods	Analytical Tool	Concerns	Appendices
4.Findings	Process & Structure		Phase 1		Phase 2		Relationship Diagram	
5.Discussion	Theme 1		Theme 2		Theme 3		Reminder of Relationships Between Themes	
6.Conclusion	Aims	Were these aims met?	Value to myself, theory / academia / professional practice	Limitations and Controls	What I have learnt about the Research Process?	What I have learnt about being a Researcher?	Extending the Project Any Improvements? Dissemination Strategy	Closing Words

Table 1: The Structure of the Research Project

Reflective Review of Table 1 (as at 6th February 2018)

As a novice researcher, I employed a systematic approach to the management of this research project, guided by the plan illustrated by Table 1(13). The tight project management employed throughout the study, ensured that I remained on 'track', and importantly, retained control of the research process.

Undoubtedly, on reflection two years on, I recognise that the time spent in reconnaissance prior to enrolling on the Masters programme was invaluable as it allowed for the evolution of ideas and the development of a clear, yet flexible, strategy to chart progress.

When critically reviewing Table 1(13) there are some minor modifications that could be made to the structure of this table to help guide researchers through the research process in the future. For example,

- The "reminder of relationships between themes" that is identified within the Discussion was in fact applied (as a handrail) in every chapter. This constant reference ensured that my writing stayed relevant and focused, a handy 'checkpoint'.

- A review of whether the aims were met (identified within the Conclusion) was explored and clearly highlighted within text boxes in the Discussion to clearly identify these to the assessor.

- Similarly, although "Appendices" are identified within the Methodology chapter, I now recognise that it would be more appropriate to refer to the management of appendices across all chapters. This would allow pinpoint reference and relevance of this material to be made.

In my role as Outdoor Programmes Manager at UCLan, I have significant experience of managing extended projects, setting targets and meeting deadlines. Applying the same tight project management skills to this research project allowed me to remain essentially within the structure identified in Table 1(13) whilst affording me the flexibility to accommodate contingencies.

1.5 Conclusion

This chapter provides the background to the research subject, my personal interest in the area of study and an outline of the structure of this research project including research aims.

CHAPTER TWO - Literature Review

2.0 Introduction

Literature, as a form of secondary data, exists in many formats: academic and professional journals; government or non-governmental organisation publications, and other policy documents, all of varying degrees of reliability. This thesis will consider material from a range of these sources and identify their usefulness to the study. The purpose of the literature review "is to provide the background to and justification for the research undertaken" (Bruce, 1994: 218). Therefore, this chapter will not only review a range of secondary literature, it will also justify inclusion and consider critical strengths and weaknesses.

2.1 Literature Selection

As I adopted the role of an 'insider' researcher (see Methodology: 49 & 59 for further explanation of this), my experience as a caver allowed me to bring context to the selected material, and enhances my interpretative skills. As will be outlined in more detail in the Methodology, this not only influenced my choice of analysis but also quite unexpectedly engaged me in having to adopt quite new and innovative approaches to gathering data with such a hard-to-reach sample group.

During the 12 months planning for this project a number of evolutions of the literature review took place, and these are represented in concept diagrams in Appendix 4(125). These concept diagrams illustrate the evolution of the conceptualisation of this issue, and the systematic identification, acquisition, representation, and management of secondary data. These concept diagrams also highlight my personal journey in the evolution of my epistemology from a

naïve to a sophisticated standpoint resulting in the process of selecting and deselecting literature to include in the literature review.

Eventually a concept map emerged, identifying the areas immediately relevant to the subject matter, which were then organised into a linear map determining the sequence of themes to be included in the literature review as illustrated in Figure 2 below:

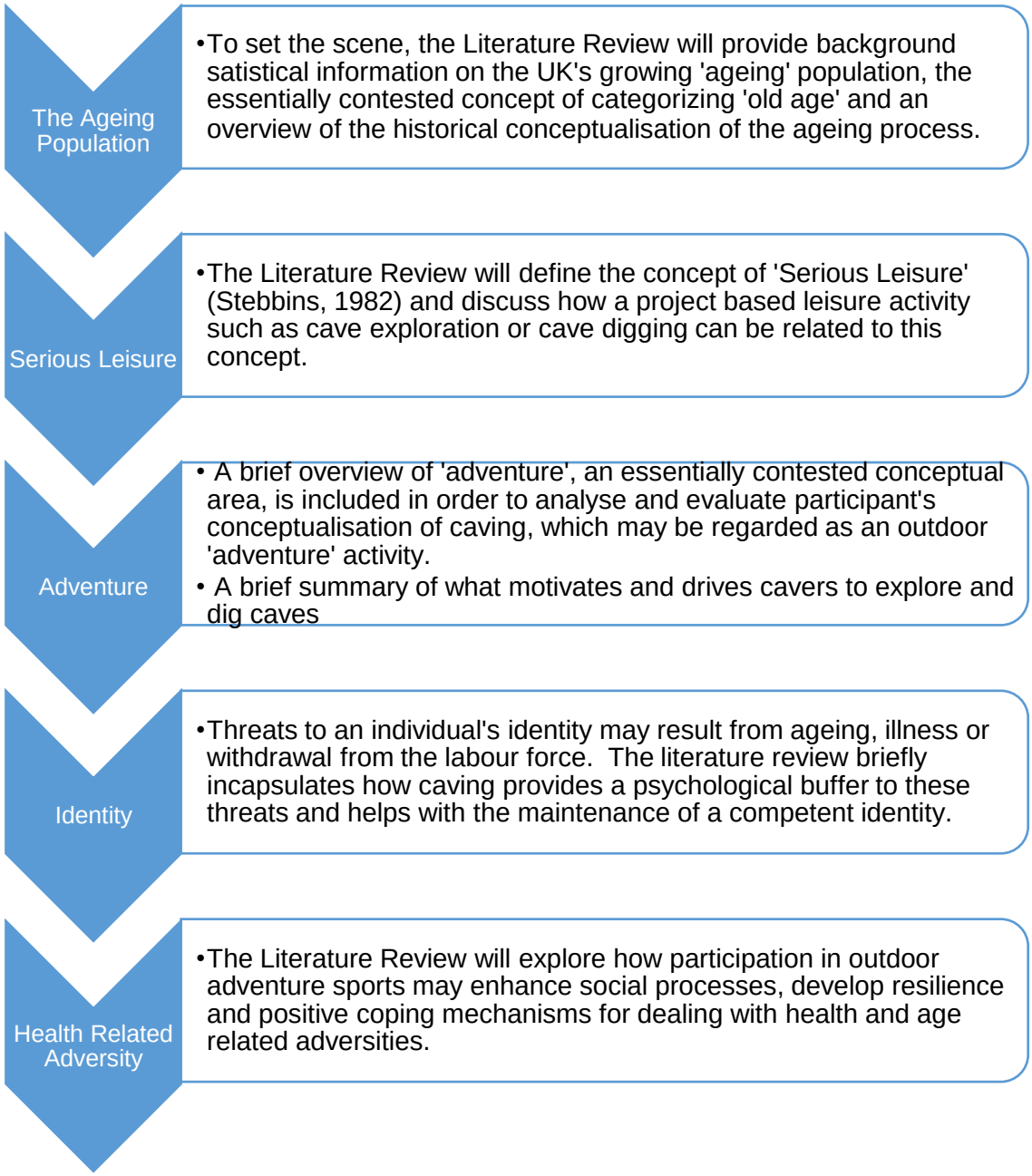


Figure 2: The Selection Process and Order of Themes for the Literature Review

Given the scale and scope of the MA(Res), I have worked closely with two critical friends (CF's) in order to prioritize areas and themes for inclusion in this project. A fuller consideration of the merits of using CFs is included in the Methodology (54) and Findings (76) chapters. By selecting themes for inclusion in this project, there were areas of research that had to be excluded. It should be noted that these were excluded only due to the constraints, scale and scope of the project, rather than because of academic or professional worth and provides the opportunity to extend the research at a later date.

Obtaining guidance from CF's on the themes to be explored, provided justification and confidence in the decision-making process, which is of significant importance when reviewing the processes applied later. Indeed, selecting and deselecting themes for this research reflects and typifies the decision-making and project management skills necessary of the postgraduate researcher (Ridley, 2012).

To a novice researcher, peer review plays an important part in the prioritization of themes, providing credibility and sense of worth to the research project. This allowed me to consider the value of both analytic auto-ethnography and phenomenology and these are explored in more detail in the Methodology chapter (46). For this project, the themes were shared with a range of different peer groups and audiences in order to obtain critical feedback. This included outdoor professionals, practitioners, cavers, academics, researchers and gerontologists at five different conferences (from August 2016 – January 2018). An outline of each conference, together with its conceptual value to the Literature Review (LR) / Thesis will now be provided in turn.

For the opening introductory slides and poster presentations of all conference presentations attended, please refer to Appendix 5(128).

Eurospeleo Caving Conference (18th Aug 2016)

Presentation: 'Project-based Serious Leisure in Adventure Sports: Older adult male cavers and positive adjustments to health related adversity – a small case study'. The conference was attended by 1,300 delegates from 36 countries from all over the world (including cavers / explorers / scientists / geologists / archaeologists / caving equipment manufacturers and specialists / historians / professional cave leaders and practitioners etc.).

Conceptual Value to the LR / Thesis: This was the first time I had presented my research publicly and the positive feedback received gave me considerable confidence and reassurance that this project was of interest and worth to cavers, **both** professional and recreational. John Gillet, a well-respected caver and author of many caving publications including 'A Bedside Book for Older Cavers' attended my presentation and expressed his interest in my project, and even offered me a free copy of his book! I also met many caving club members including the Council of Northern Caving Clubs (CNCC) Cave Conservation Volunteers) who informed me of similar digging and conservation projects being carried out by older cavers in other regions of the UK. This reinforced my belief that this case study is just one of many examples of such projects being carried out across the UK by 'older' cavers. Do older cavers in other regions of the UK have similar perceptions of the value of their caving projects? Should I decide in due course to further my studies (perhaps at PhD level), then the industry informed feedback received from this conference, would suggest that there are many more lines of enquiry such as digging and conservation projects being undertaken by older cavers to investigate further across the UK.

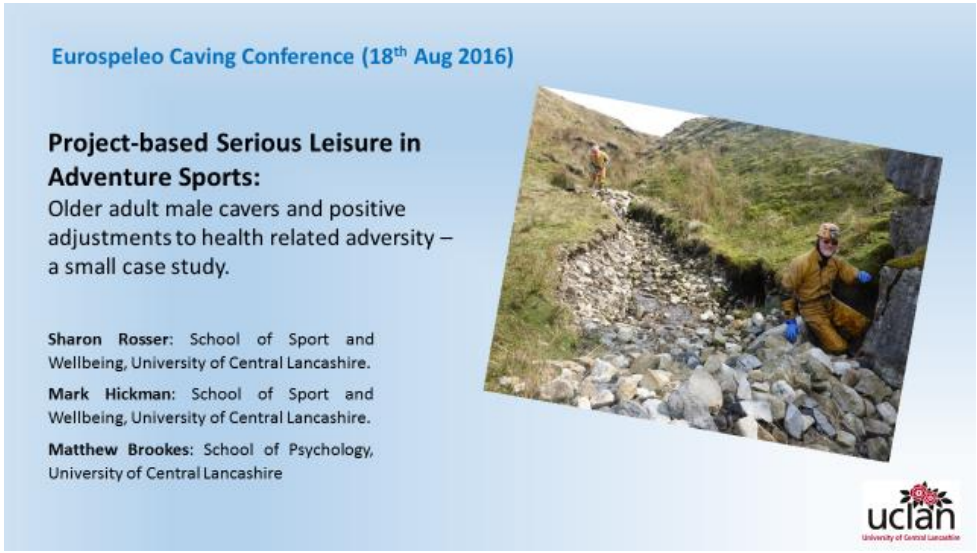


Figure 3: Opening Slide of Eurospeleo Conference Presentation (18th Aug 2016)

Figure 4: Opening Slide of UCLan Annual Student Research Conference Presentation (8th Sept 2016)

UCLan Student Research Conference (8th Sept 2016)

Presentation: 'Coping with the 'rustiness' of old age: adult male cavers, adventure, and responses to health related adversity – a small case study'.

This conference enables UCLan research students the opportunity to present their research projects to fellow researchers and academics.

Conceptual Value to the LR / Thesis: As a novice researcher, I was more apprehensive about presenting my research to an audience of academics and researchers at this conference than I was presenting to cavers with whom (at this preliminary stage in my research) I felt I could more easily relate to. The feedback received from a number of academic staff following my presentation however was very positive. By sharing the preliminary findings and emerging themes with fellow researchers and academics, I developed further confidence in the value and credibility of my research project, and the questions asked by members of the audience helped to develop my critical appreciation of the theoretical background and literacy framework which will underpin the study.

Figure 5: Opening Slide of IOL / AHOEC Conference Presentation (14th Oct 2016)

Institute of Outdoor Learning (IOL) National Conference and The National Conference for The Association of Heads of Outdoor Centres (AHOEC) 14th Oct 2016.

Presentation: 'Growth in action: Adventure sports and personal learning past the age of 65'. This National Conference was attended by outdoor professionals, practitioners, academics, researchers and Heads of Outdoor Education Centres from across the UK.

Conceptual Value to the LR / Thesis: The feedback and discussions that took place following my presentation with outdoor professionals and practitioners reinforced my appreciation of the need to share and disseminate my findings to IOL / outdoor practitioners / the wider outdoor industry. This industry based feedback is invaluable in informing the direction and dissemination of my findings to the industry and recognition of the practical implications for practitioners 'on the ground'.

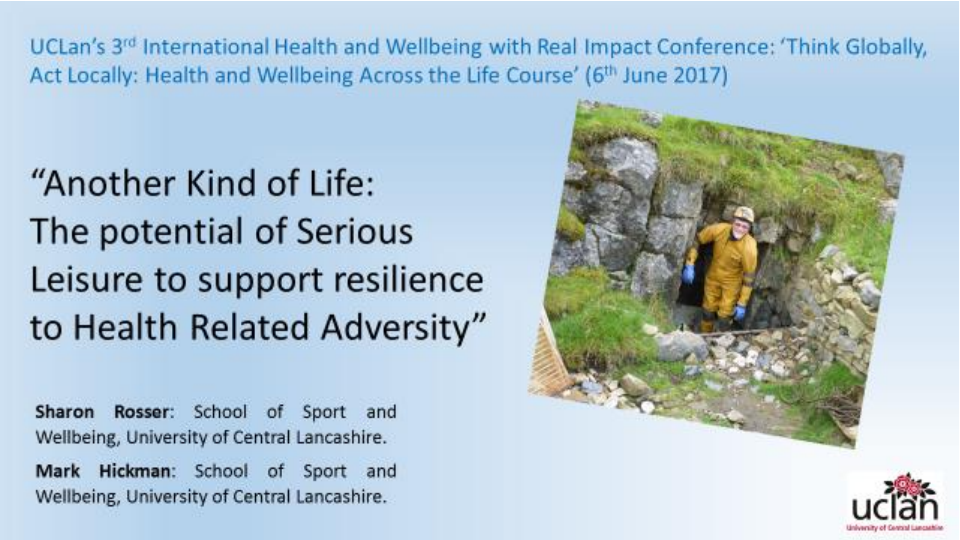


Figure 6: Opening Slide of UCLan's 3rd International Health and Wellbeing with Real Impact Conference Presentation (6th June 2017)

UCLan's 3rd International Health and Wellbeing with Real Impact Conference: 'Think Globally, Act Locally: Health and Wellbeing across the Life Course', 6th June 2017.

Presentation: 'Another Kind of Life: The potential of Serious Leisure to support resilience to Health Related Adversity'. This international conference was attended by health professionals and practitioners, sports therapists, scientists, academics and students.

Conceptual value to the LR / Thesis: As a result of presenting one of my key themes at this conference, I made useful contacts with other researchers who specialise in active ageing and supporting resilience in older adults. This highlighted the value of sharing my research at such international events in order to enhance inter-College collaboration within UCLan, and maximise opportunities for reaching a wider (international) audience.

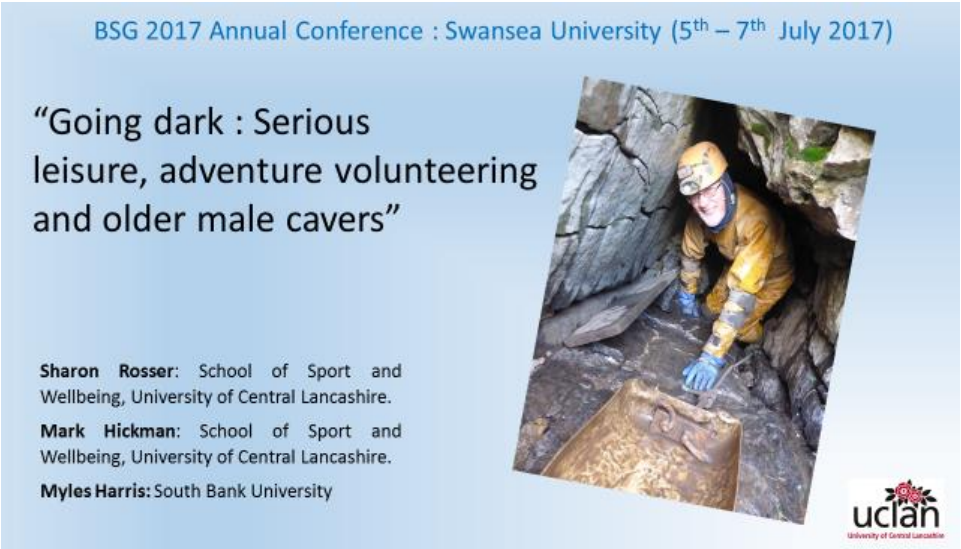


Figure 7: Opening Slide of British Society of Gerontology Annual Conference Presentation (6th June 2017)

The British Society of Gerontology, 46th Annual Conference, Centre for Innovative Ageing, Swansea University. 'Do Not Go Gentle - Gerontology and a Good Old Age, The Art of Ageing'. 5th-7th July 2017.

Presentation: 'Going dark: Serious leisure, adventure volunteering and older male cavers'.

Conceptual value to the LR / Thesis: As a novice researcher, to be accepted to present at the annual conference for the British Society of Gerontology (BSG) was both an honour and a privilege. The sharing and dissemination of my findings to an audience of academics, researchers, and health professionals who specialise in the area of gerontology, was of prime importance in shaping my critical appreciation of the literature. The value and credibility of my research was further enhanced when following my presentation, I received congratulations from the Chair of the session, for being accepted and presenting at such a prestigious event, at this level "To be accepted to present at the BSG's conference at a Masters Level says a lot about the value of your work. Well done"

It is this pro-active interaction with experts both practitioner and academic, exploring the subtle nuances in the interplay between theory and practice and as a result of presenting at such a range of conferences that has influenced the conceptual development of my thinking.

Through this inter-active sense making (Weick, 1995), the literature review evolved to deal with five themes, as represented in Figure 2 (17).

Whilst the literature on ageing is broad, little exists specifically on how the process or state of ageing is perceived and experienced by **older adults** who participate in adventure sports, and specifically in the sport of caving. What role does 'adventure sport', in this case, cave exploration or 'cave digging' play in the ageing process? Furthermore, we need to ask whether the terminology 'adventure sport' is appropriate in this context as the data collected for this work does not support the notion.

Within UCLan's School of Sport and Wellbeing, research into active ageing in rock climbing (Hickman, Stokes, Beard & Inkster, 2017) and sea kayaking (Hickman et al, 2016) is already well underway. This research project will contribute to the expanding body of knowledge in the area of active ageing and notwithstanding terminology at this stage of the work, 'adventure sports'. It is intended that this research project will *'dig deeper'* into the benefits of outdoor adventure activity for older adults and in particular, the underground activities of caving. It is to the first of the selected areas that we will now turn.

2.2 The Ageing Population

For the purposes of this Literature Review, and relevance to this study, it is necessary to address three concepts concerning 'The Ageing Population'. First,

there will be an overview of recent changes to the United Kingdom's demographic population which will briefly outline some of the *predicted* implications of any changes in trends. This is important in setting the scene for this study and providing the statistical evidence of recent population trends. An increasing ageing population and therefore increased number of people with potential withdrawal from the labour force could signify greater potential for social isolation, loss of identity and psychological issues, which are some of the key challenges of the ageing process, which will be discussed in this study. However, this must always be approached with a degree of caution as 'Big Data' statistics can be inaccurate and lead to 'inflated expectations and disillusionment' (Rossi, 2016).

Secondly, as part of the 'Ageing Population', the classification of 'old age' will be explored, an essentially contested concept (Gallie, 1964), inconsistent across many fields. For the purposes of this study, since a categorization is useful, an appreciation of the discrepancies concerning this concept is required and therefore is included in this Literature Review.

Finally, this section will explore the conceptualization that ageing in the past may have been 'pathologised' and perceived as a period of decline and suffering, rather than celebrating its potential benefits (Phillipson, 1998). It is important to explore this conceptualisation as this study aims to investigate the perceptions of older cavers today, and therefore an appreciation of historical perspectives will allow comparisons to be made. Is ageing still characterised by 'pathologisation'? a problem? or a period of decline? or is it regarded as a period that can and does offer opportunities?

2.2.1 The Demographics.

There are currently in excess of ten million people aged 65+ in the United Kingdom, with the number *predicted* to almost double to 19 million by 2050 (Cracknell, 2010). To put this into perspective, this equates to an increase of one-in-four of the UK population aged 65+, compared to one-in-six currently (Rutherford, 2012).

Boksberger and Leasser (2009: 311) claim this "rapid growth in senior population" is due to an increase in average life expectancy, resulting from improved medical treatments and pharmaceuticals and a better quality of life due to the development of economic wealth and social security. However, Cracknell (2010) attributes the ageing population to the large number of people born during the 1960s 'baby boom', as well as increased longevity. Additionally, Dytchwald and Flower (1989) applied the term 'age wave' to describe the growth and wave-like movement through western societies of the 'baby boomer generation' highlighting the wealth of terms used to describe this particular ageing cohort. Dytchwald (1999) further projects that those at the wave front would reshape the concept of the life course and transform healthcare, technology, financial services, work, education, leisure and retirement, which is relevant to this study.

Literature reconsideration with present data at a local and national level: More recently, Campbell (2017) reported that data suggests that rises in life expectancy in the UK have stalled, an idea endorsed by others (Burton, 2017; Iacobucci, 2017) and also in the USA (Tinker, 2017).

Although a detailed analysis of the implications of the ageing population is beyond the scope of this Literature Review, it is important to acknowledge reports from Rutherford (2012) and House of Commons Library (2015), 'Key Issues for 2015 Parliament', which suggests that this increase in the elderly population in the UK

will put greater pressure on the National Health Service and care home capacity – further examples of pathologising older age rather than celebrating its wisdom and contribution to the wellbeing of society. It is further recommended in 'Key Issues for the 2015 Parliament' (House of Commons Library, 2015) document that polices which improve preventative healthcare and help people to remain active and healthy in later life could help increase healthy life expectancy (the proportion of their life in good health) and reduce costs. At the time of writing, both the Alzheimer's Association International Conference, recently held in London, and the Lancet Commission, led by Professor Gill Livingstone identified nine lifestyle changes that could reduce the risk of dementia including physical activity, avoiding social isolation and remaining cognitively active: all key elements in caving and activities such as, but not limited to, sea kayaking, climbing and mountaineering.

2.2.2 The Classification of 'Old Age'

For the purposes of this study investigating the perceptions of 'older cavers', a categorization of an 'older' adult is required. However, exactly when **older adulthood** begins remains a topic of debate, and an essentially contested concept (Gallie, 1964), as definitions of old age are inconsistent across many academic fields (Dannefer & Settersten, 2013, Victor 2013 and Westendorp & Kirkwood, 2014).

One useful bench mark that might be applied by a researcher when trying to determine when older adult life begins is the age at which an individual is designated eligible for withdrawal or retirement from the work force. In the United Kingdom, according to The Organization for Economic Cooperation and Development (OECD, 2012), this eligibility is 65 in 2016 for both men and women,

yet is set to rise to 66 in 2018, and then 67 by 2028. It has been reported in OECD's *'Pensions at a Glance'* (2015: 9) that with regards to official pension ages, "67 has indeed become the new 65 and several countries are going even further towards ages closer to 70". This does not necessarily mean that all people actually work up to these higher ages, although some may choose to do so, and indeed research suggests that the number of people aged 55-64 and those aged 65+ in employment is on the increase (ONS 2015, EU-OSHA et al 2017). Older workers are increasingly encouraged to work longer, until and often beyond statutory retirement age. Incentives may include arrangements for flexible working hours; financial incentives, role reassignments, and knowledge transfer within organisations, which allows for a greater share of workers remaining healthy in work for longer (Eurofound, 2012). Wylleman and Lavalle (2006) and Gordon and Lavallee (2012) have shown that withdrawal from the labour force is replete with problems; an idea endorsed, and articulated by the ex-professional racing cyclist Charly Wegelius:

> "Cycling defined me as a man, so what could I do after my professional career was over? It is the same for so many sports people the world over. No matter what the sport and no matter the person, finishing a professional career is a kind of death. Like mortality itself, you see the end coming after a dwindling demise, but you have no idea what the afterlife will hold".
>
> (Wegelius, 2014: 293).

Withdrawal from the labour force for older adults can also entail the catastrophic loss of physical, social and self-referenced co-ordinates. Levine (2008) argues that any metric by which individuals are deemed 'old' is subjective and subject to

bias, interpretation and debate. Levine (2008) claims that individuals' age at different rates, and this is related to genetic and environmental factors, such as nutrition, education, healthcare, working conditions and lifestyle. A person's physiological age (i.e. current physical condition) may be very different from his or her chronological age, calculated by date-of-birth. Recent research suggests that perhaps ageing should not be regarded as simply a linear and rigid process but that it is more appropriate to understand ageing as a 'lifelong experience' that is multifaceted, flexible and influenced by the contexts in which individuals live (Moody & Sasser, 2015).

When considering age categorization, Laslett (1996) also refers to the 'whole life course', and in doing so, identifies four distinct stages of ageing. Childhood, a period of dependence, socialization, immaturity and education. Adulthood, the second stage (or 'age'), is a time of independence, maturity, responsibility and earning. The third stage, (fulfilment), is according to Laslett, when people are socially connected through family and friendship networks, in good health, with financial means, and able to fulfil personal goals, dreams and life plans. Whereas the fourth and final stage is described as final dependence, a time of decline, decrepitude and death. In this analysis of the ageing process, the distinction between the four stages does not change according to age / date of birth, or for a set period of years, as Laslett argues that one stage may be lived simultaneously with another (i.e. if experiencing life achievement at the same time as earning, sustaining a family, or achieving a pinnacle within your own career, a person could be in stage two and three simultaneously).

Debating the starting point of 'old age' is relevant to this study, yet brings challenges to any research project seeking a baseline, as attempts at categorization will be contested and subject to criticism. For the basis of this study

it was therefore deemed appropriate to examine what age bracket or categorization had been applied in similar research studies of older adults and adventure sports. For a study of older adults in adventure education programmes in the U.S, Brennan (2008) based his categorization on Dytchwald's (1999) gerontological view of old age as having three distinct phases: 'young-old' from 65-74; 'old-old' from 75-84; and 'oldest-old' from 85 onwards. Since it was Dytchwald's categorization that was also applied by Hickman (2015) for a study of rock climbers aged 65+, participants in this study were similarly sought from the 65-74-year-old age range (young-old classification), in order that comparisons with this research could then be made.

2.2.3 Conceptualisation of the Ageing Process

Whilst some theories might 'pathologize' the ageing process and suggest that adults over 50 years old are in physical decline, dependency (Vertinsky, 1995) and 'progressive enfeeblement' (Gilleard & Higgs, 2000: 126), not all ageing theories portray disengagement and decline (Kluge, 2005). The geotranscendence theory suggests that positive changes occur *throughout* one's lifetime (Tornstam, 1997) and that change or geotranscendence is viewed as growth not decline. This study supports this notion, and illustrates that ageing is not necessarily a time of disengagement and decline, but more perhaps of providing opportunities.

By investigating perceptions of active ageing by cavers aged 65 and over, this research project will illustrate that there are vastly differing views of what it means to age and grow old, as proposed by Kluge, (2005) and Boksberger and Laesser, (2009).

The largely stereotypical view of ageing being a period of decline and decrepitude (also portrayed by Laslett, 1996 above) is summed up by Shakespeare in Jaques' speech in "*As You Like It"* (c1600), the 'Seventh' and final stage being described as "sans teeth, sans eyes, sans taste, sans everything" (Act II, Scene vii). However, there is increasing evidence to show that 'active' ageing can help to offset some of the debilitating effects of the ageing process.

Rowe and Kahn (1998) suggest that the three factors crucial to successful ageing are the absence of disease and disability; maintaining mental and physical functioning and continuing engagement with life. The concept of 'successful ageing' is being increasingly conceptualised as **multi-dimensional,** and in Boyes (2013: 646) it is acknowledged that successful ageing (according to Fernandez-Ballesteros et al, 2008, 2010) includes components of:

a) physical health e.g. free from chronic diseases

b) social health e.g. having family and friends

c) psychological health e.g. feeling good about myself

d) functional health e.g. staying involved with the world and people

Researchers have found that leisure activities play an important role for older adults and successful ageing (Menec, 2003; Nimrod, 2007; Payne, Mowen & Montoro-Rodriguez, 2006). Of particular relevance to this research is Boyes' (2013) study of the effect of outdoor adventure activities on successful ageing. Boyes highlighted the **multi-dimensional** benefits of *outdoor adventure* activities and successful ageing, in particular, the physical, social and psychological gains, as described above. This study will support Boyes' notion that adventure sports are mentally and physically challenging, enable social interaction and engagement with the natural environment.

For the purposes of this study, the *characteristics* of the activity engagement which promote successful ageing are also of particular interest. Vaillant (2002) identified four characteristics of rewarding activities in retirement, all of which are supported in this study: provision of a social network, an outlet for creativity, opportunity to be playful and the provision of lifelong learning opportunities.

As well as identifying characteristics for rewarding activities, it is of relevance to acknowledge Steptoe, Deaton and Stone (2015), who go on to identify three aspects of subjective wellbeing: evaluative (life satisfaction), hedonic (happiness and sadness), and eudemonic (sense of purpose and meaning in life). Furthermore, they suggest that wellbeing could have a protective role in health maintenance, in survival and longevity. It is these same characteristics identified by Vailliant (2002) and Steptoe, Deaton and Stone (2015) that are associated to 'Serious Leisure', a concept developed by Stebbins (1982, 1992, 2001, 2007) to which this Literature Review will now turn.

2.3 Serious Leisure

The concept of 'Serious Leisure' is described by Stebbins (1992:3) as "the systematic pursuit of an amateur, hobbyist, or volunteer activity". It must be substantial, interesting and fulfilling to participants and requires a combination of specialist skills, knowledge, and experience that can take a long time to develop. In contrast, Stebbins (1992) claims, 'casual leisure' may be regarded as immediately rewarding, relatively short lived with little or no need for specialist skills and training.

This case study will illustrate how outdoor adventure activities, such as cave exploration, can fulfil the six interrelated qualities of Serious Leisure identified by Stebbins (1982):

1. *The need to **persevere** to overcome difficulties*
2. *The provision of a career involving stages of **achievement** and **involvement***
3. *Requirement of significant personal **effort***
4. ***Durable benefits** (such as social interaction, belongingness, self-expression, self-enrichment, enhancement of self-image, feelings of accomplishment, lasting physical products, self-actualisation and renewal of self)*
5. *A **strong identity** that participants form in connection with their chosen pursuit*
6. *A **unique ethos** that forms in connection with the activity and leads to the development of a special social world.*

Stebbins (2001) suggests that the routine of serious leisure can be appealing for those who following retirement must cope with severely shortened work weeks or no work at all. Research suggests that serious leisure can provide an effective substitute for work, providing a sense of identity and belonging (Heley & Jones, 2013), physical and mental benefits (Brown, McGuire & Voelkl, 2008), and without financial remuneration. Due to its systematic engagement, interest and fulfilment, it is expected that participants of serious leisure will be more actively engaged in their leisure activity than those involved in more 'casual leisure'.

Research suggests that serious leisure participants experience feelings of accomplishment, self-actualization, self-enrichment, and physical health as well as sharing a common ethos, sense of kinship with others, and pride in their chosen activity (Lee & Payne, 2015). The health benefits from social engagement and a sense of 'community' are well documented. In outdoor adventure sports, Boyes (2013) claims that participants spending time together solving problems

actually intensifies social processes, as participants rely on support from one another and build strong friendship networks. This case study which involves a group of older adult cavers who spend considerable amounts of time in close proximity to each other, overcoming problems and challenges in an underground environment will support this claim.

Of significant relevance to this study is Stebbins (2009:15) use of the term 'Nature Challenge Activities' (NCA) to describe those leisure activities in which the focus is on meeting a challenge "posed by one or more of these six elements: 1) air, 2) water, 3) land, 4) animals (including birds and fish), 5) plants, and 6) ice or snow". While executing these NCA activities, Stebbins (2009:15) suggests that, "the special (aesthetic) appeal of the natural environment in which this process occurs simultaneously sets the challenge the participant seeks". Stebbins (2009) provides examples of NCA's that include caving, sea kayaking, rock climbing, mountaineering, sailing, and amateur bird watching. Activities **not** regarded as NCA's include those in which participants are not themselves in the focal natural setting (i.e. controlling a model boat / plane / flying a kite). 'Extreme' activities are also excluded since it is likely that the participant's attention will move away from the attraction of the activity to the need to avoid serious injury / death! Activities which take place in primarily artificial settings such as ice rinks, artificial climbing walls and swimming pools are also not regarded as NCA's, as are activities whose primary focus is promoting fitness, such as jogging, swimming, rowing, even if these take place in natural settings. According to Stebbins (2009), NCA activities are exclusively 'serious leisure' experienced in highly appealing natural settings, where the primary reward is personal fulfilment in an 'awe-inspiring' environment, with minimal environmental damage. NCA's also contribute to participant's physical fitness and "offer greater scope for human agency than

many other kinds of leisure activity" (Stebbins, 2009:17). In other words, NCA's enable the ability to explore without constraints, as the cavers in this study clearly demonstrate (both physically and conceptually).

This study will support the notion that participating in these 'nature challenge' activities within a project-based 'serious leisure' framework enables sustainability of effort and commitment to that activity. Indeed, as touched upon below, the participants in this study contested the use of both adventure and sport to describe what they do, indicating that Stebbins' NCA offers a more appropriate term and a platform from which to extend this work beyond Level 7.

2.4 Adventure

Within adventure education literature, adventure is commonly defined by the notion of **uncertainty of outcome** (Hopkins & Putnam, 1993; Mortlock, 1984; Priest, 1999), whilst for others, such as Wurdinger (1997), risk is a distinguishing factor. Ewert & Garvey (2007) claim that it is a combination of factors: "inherent in adventure education is the inclusion of activities and experiences that often include elements of danger or risk and uncertain outcomes". In cave digging, cavers are venturing into unknown territory with the uncertainty of not knowing what lies beyond the dig face, and the unexpected dangers and risks of collapse, rockfall, flooding etc. Gillet (2013:27) describes some of the uncertainties faced by cavers:

> "We may get lost and tired out. We may underestimate the rise in water levels and get trapped, or drown. We may disturb loose boulders and get crushed. We may squeeze into a tight crawl and get stuck. We may not put on effective clothing, get cold and wet and suffer hypothermia. We may slip and fall from height. We may not rig our rope systems properly and

have trouble getting back up, or let abrasion break them. Our personal equipment, particularly our light, may fail when least expected. Let's face it; with this degree of uncertainty, we need to be very careful when we go caving!"

It is claimed that adventure can provide an escape from the 'anxieties of modern existence' (Mortlock, 1984), and takes place beyond the banalities of everyday life. Holyfield, Jonas and Zajicek, (2005:174) support this claim and recognise the emotional commitment, defining adventure as a "**voluntary engagement** in novel, uncertain and most often emotionally intense recreational activity".

This study will support the notion that adventure activities (such as caving), in a project-based 'serious leisure' framework provide the opportunity for challenging **physical activity**, development of **social engagement** and **interaction with the environment**. It provides the opportunity to fulfil self-set personal goals, and overcome challenges, sometimes in uncertain or untouched natural environments. The interaction with the natural environment is a key component of adventure and is supported by Stranger (1999), who suggests that adventurers can develop a strong environmental rapport and connection with the environment in which their adventure takes place.

The personal fulfilment, close connection with the natural environment, and opportunity to enhance personal fitness supports the notion of caving as a 'nature challenge activity' or NCA (Stebbins, 2009). In common with NCA's, caving is unconstrained and offers greater 'human agency' than other leisure pursuits. This is supported by Boyes (2013: 648) who claims that such 'risky' activities provide opportunities for participants to find their own way whilst meeting self-set personal goals often against environmental challenges. Furthermore, this study will

explore Boyes' (2013: 644) claim that older adults' participation in adventure sport is a successful ageing strategy, "relatively low cost, community based, has many preventative health benefits, builds communities and embraces the environment". However, the research conducted for this thesis identified distinct tensions within the sample group, with caving being perceived of as neither adventurous nor constituting a sport. These issues, and their problematic nature will be considered in more detail as part of the Discussion (79).

2.4.1 Adventure and the Allure of Cave Exploration

"Why do you go down these caves?" and "What do you find down there?" are typical questions that non-cavers might ask a caver emerging from a cave entrance. What entices the caver to explore the subterranean world? What drives cavers to the seemingly high risk underground environment in search of the unknown? This study will explore the perceptions of older cavers and the aspects which drive and motivate them to voluntarily explore and dig caves. Therefore, an appreciation of the reasons for using and exploring caves, this unique natural resource, both past and present is necessary.

Caves can evoke feelings of excitement, mystery and fear. Historically, caves have been regarded as places of shelter (Cullingford, 1953), to corral animals and other goods (Crane & Fletcher, 2015), for habitation (Barker & Beck, 2010; Cullingford 1953), for burial (Barker & Beck, 2010; Farr, 2001; Cullingford, 1953; Gray, Taviner & Witcombe, 2013;) for hiding treasure (Farr, 2001), home to legendary giants (Oldfield, 2015) mythical dragons (Dafydd, 2007) and wild beasts (Farr, 2001), for scientific research (Crane & Fletcher, 2015), for outdoor education (Sparrow, 2009) and adventure (Farr, 2001) and more recently a place

for adventure thrill seekers, attracted by the experience of using zip wires and trampolines in vast underground caverns (Kitching, 2015).

To understand the drive and motivation of the older cavers in this case study, it is necessary to ‘delve’ deeper (literally!) into the reasons behind exploring caves. Trevor Shaw (1992), a cave science historian, provides four reasons for exploring caves:

a) Simple curiosity
b) Scientific curiosity
c) Commercial exploitations
d) Enjoyment of a challenging sport.

It is precisely the type of historical linguistic accretion proposed by Shaw, that caving is a sport that has remained unchallenged and un-problematized for so long, and will be addressed in greater detail later.

To a caver, exploring a cave for the first time is a unique journey into the unknown, even if others have explored it previously. It could be argued that even in previously mapped cave systems, armed with cave surveys and guidebook descriptions, the cave environment remains ‘unknown’ until actually experienced by each caver in person: thus caving can be simultaneously a highly private yet social experience dependent upon individual. Gillett (2013:17) explains that “for the older caver there will be the pleasure of revisiting old routes as well as the anticipation and excitement of finding new routes, tinged with the challenges presented by a reduction in physical ability”. The **‘ultimate’** unknown or goal for many cave explorers is to discover **new** cave or passage where no one has ever been before. A ‘breakthrough’ which leads to passages and chambers never seen or touched before can provide the greatest pleasure and “an indescribable feeling of numinous” (Gillet, 2002:46). Notwithstanding the problematic terminology

alluded to above, in ‘Underground Adventure’, a legendary account of cave exploration in Yorkshire in the 1940’s, Gemmell and Myers (1952:3) reveal the subtle raptures of caving:

> “A caving trip is an adventure, and as such appeals to that restlessness of spirit which resides in some form in the heart of every man; the same irresistible urge which carried men from this little island to the far corners of the earth. It is the same lure of the unknown which has inspired men to cross the wildest desserts and to climb the highest mountains, and which finds its greatest satisfaction in the ultimate ambition of every explorer – to set foot where none has been before”.

It might appear that there are few untrodden places on the surface of the earth, yet it is the belief of the cavers in this study (together with many other cave explorers worldwide) that vast underground passages and chambers still remain undiscovered and untouched by humans.

A ‘breakthrough’ as it is known in caving, often occurs as a result of digging and ‘pushing’ promising ‘leads’ derived from local or geological knowledge of existing cave systems, often indicated by a change in temperature or airflow. Vast amounts of time can be invested digging, with no guarantee of success. “Does it go? This is the question that hooks the cave explorer and drives his / her curiosity towards an answer” (Kambesis, 2007:46).

This case study will show how a small cave in North Yorkshire is being excavated by a group of ‘older’ cavers, attracted by the unknown potential and ultimate goal and ‘prize’ of venturing where no man has been before. “No one knows where the next such prize will come from, nor how many caverns remain to be

discovered. This unknown potential is the very heart of caving, the powerful force of the underground" (Gillet, 2002:46).

2.5 Identity

For some people, retirement or withdrawal from the labour force may leave a 'void' with increased 'free time', a lack of structure and purpose, as one's professional role begins to fade (Wylleman & Lavallee, 2006; Gordon & Lavallee, 2012). Activities which give meaning to life particularly after an individual has withdrawn from the labour force act as a platform for the ongoing development of the life story (McAdams, 1993; Grant & Kluge, 2007).

Research suggests that there is a threat to identity from i) ageing, ii) illness and iii) withdrawal from the labour force (Tanner, 2010). Caving provides a psychological buffer to these threats, through the maintenance of a believable and competent identity. It is also one that overtly supports maintained physical capacity and technical skills, and as this case study will show, this is both important for males and their 'pre-existence' of work based roles (i.e. as engineers).

Cave exploration or cave 'digging' is highly skill dependent, and both physically and mentally challenging. In some situations, digging is as simple as pulling dirt, leaves, and a few rocks out of a sinkhole but at other times, a dig is a more serious proposition requiring specialist equipment such as sledgehammers, chisels, hammer drills, jackhammers, hauling and pulley systems, scaffolding, explosives, pumping and drainage equipment. Problem solving and project management skills are key components to the success of a digging project, and in this particular case study, (like so many successful digs), the diggers utilise their experience, knowledge and workplace skills (such as engineering, building and project

management skills) to the benefit of the dig and the project. As previously described, ‘serious leisure’ (Stebbins, 1992) involves a systematic pursuit of sufficient interest to require the development of specialist skills, knowledge and experience (Cohen-Gewerc, 2013), and this case study will show that a cave digging project fulfills this criterion. This project enables older adults to transfer and maintain their skills, which in turn provides a continued sense of self-worth and identity. Remaining active, skilled and knowledgeable post retirement from the labour force enables the reinvention or reinforcement of one’s identity and enhances a sense of purpose and belonging to a community. Leisure activities can be central to the maintenance and development of identity (Atchley & Barusch, 2004; McGuire, Boyd & Tedrick, 2009) and according to Blaikie (1999: 73), “can be a transition to a new life, rather than a continuation of the old”. The sharing of knowledge and skills post retirement in this case study supports the notion that following withdrawal from the labour force, participants in ‘nature challenge activities’ populate their time with aspects of their identity that provide purpose and self-belief.

2.6 Managing Health Related Adversity

It is recognised that there is an inevitable degeneration of the human body with ageing, however research suggests that this can be slowed down (Chodzo-Zajko, 2013; Norman, 2010; Livingston et al, 2017). Physical exercise is considered the best means currently available for delaying and preventing the consequences of ageing, and of improving health and wellbeing (Castillo-Garzón, Ruiz, Ortega, & Gutiérrez, 2006). Yet recent literature suggests that **adventure sports** are more likely to produce long-term benefits for older adults (Howes, 2016; Boyes, 2013). This case study of older cavers engaged in a ‘serious leisure’ project supports

the notion that maintaining physical activity, social connectedness, environmental engagement and psychological involvement, has health benefits for individuals and society (Alves and Sugiyama, 2006). These are broadly in-line with the findings described by Steptoe, Deaton and Stone (2015).

Of relevance to this study, Ewert and Yoshino (2011) found that *short-term* adventure activities (i.e. a three-week expedition) was effective in enhancing levels of resilience in *young* people. Although Ewert and Yoshino (2011) focussed on young people participating in short term projects, it is of relevance to include this in the literature review in order that comparisons can be made with older people participating in long term projects within an adventure activity and whether levels of resilience are also enhanced.

This case study will show that long term investment in an outdoor adventure sport such as a cave digging project (which can also be perceived as 'serious leisure'), has far more enduring implications for enhancing resilience in older adults.

What can adventure sports offer that traditional sports may not?

Boyes (2013) recognised that outdoor adventure activities offer social capital, physical activity and engagement with the natural environment, all of which are fundamental components to successful ageing. Outdoor adventure sports, such as caving, are self-selected and self-paced, involve goal setting and high levels of social interaction. This case study will show that these components contribute to an 'alternative value' (Holowchak & Reid, 2011; Hickman et al, 2015) as the project has many remunerations and benefits beyond the physical activity of 'digging'. Despite the self-paced nature of caving, it is still regarded as a 'team sport' and as such "involves inter-reliance as much as self-reliance" (Heap, 1964: 11) between the group members. In many outdoor adventure sports, and in

caving in particular, participants are very much reliant on each other as they venture into completely unknown territory. The hazards and risks associated with this type of environment and in this particular adventure sport are often perceived as high, “it is useless to pretend that there is no risk in caving”, (Heap, 1964:4). However, hand in hand with the attraction of uncertainty and danger, is the shared sense of achievement and reward when goals are met. Sparrow (2009:9) describes the heightened experience of cave exploration “when the adventure of exploration combines with the mystery of the genuinely unknown, the intensity of the experience is unique”. As this case study will show, it is the tight social bonds that exist between adventure sports participants (in the form of ‘serious leisure’) that are the very mechanisms that support the networks that enhance resilience and support wellbeing in older adults. Heap (1964) acknowledges the tight bonds that exist within a rugby or cricket team and compares this with the bonds within adventure sport groups:

“The same bond is stronger between members of a potholing or climbing group, for they have been reliant on each other for far more than merely winning a game … for they may be dependent on each other for no less than their lives, as are all the members of a potholing team. I cannot cave at my best if I do not feel safe with my companions”. (Heap, 1964:11)

This research project will support the notion that social capital (i.e. the development of social relationships and community integration) is a key variable in building resilience and positive coping mechanisms, both are which may be regarded as vital components of successful ageing (Hildon et al, 2009). Furthermore, it is recognised that resilience is an essential part of successful

ageing, particularly in the face of adversity and the challenges of late adulthood (Hildon et al, 2009). Belonging to a community with strong social ties underpins the benefits of adventure for older people and enables inter-personal coping networks to be developed (Boyes, 2013). This case study will show that participants spending considerable time together, overcoming difficult challenges and problem solving, leads to intensified social processes (Boyes, 2013). This is particularly relevant as Lee & Payne (2015) suggest that the higher the social component of the 'serious leisure' activity the more likely serious engagement will occur and be maintained.

In summary, this research will support the notion that volunteering in a **'nature challenge'** activity (Stebbins, 2009) within a project-based **'serious leisure'** framework encourages sustainability of effort and commitment to that activity and act as a platform for dealing with health and age-related adversities through the development of social relationships, enhancing resilience and supporting well-being.

2.7 Conclusion

The aim of this chapter was to illustrate the process applied for the selection and order of the five themes to include in the literature review: the ageing population, adventure, identity, 'serious leisure' and health related adversity. The conceptual diagrams and critical feedback received at a range of conferences illustrates my personal journey in the evolution of my epistemology from a naïve to a sophisticated standpoint resulting in the process of selecting and deselecting literature. This record of my journey and the decision making process employed when selecting literature has proved to be extremely valuable when reflecting on my development as a researcher (fulfilling the first aim of this research project).

CHAPTER THREE – Methodology

3.0 Introduction

The aim of this chapter is to illustrate the methodological approaches applied to the project, and critically explore the methods, or data-collection instruments, appropriate to investigating the perceptions of older adult cavers aged 65+.

In order to research and uncover data pertinent to any aim, a researcher needs a methodological approach, and the appropriate tools or instruments in order to both unearth and analyse that data, irrespective of what that data might look like. This section will now briefly explore the common, although not exhaustive, approaches open to investigators.

3.1 Ontological and Epistemological Considerations

Variations in approaches to research are dependent upon a range of factors, such as the researcher's "beliefs about the nature of the social world (ontology), the nature of knowledge and how it can be acquired (epistemology), the purpose(s) and goals of the research, the characteristics of research participants, the audience for the research, the funders, and the positions and environments of the researchers themselves" (Ritchie, Lewis, McNaughton-Nicholls & Ormston, 2013:2). Thus, for a researcher, identifying one's own ontological and epistemological standpoints can give rise to an awareness of possible biases for, or even against, a particular approach.

Additionally, for a novice researcher, considering different ontological and epistemological positions is a crucial starting point, as it provides the theoretical underpinning to support the methodological approach used for this study.

Ontology is essentially concerned with existence, “the nature of reality and what there is to know about the world” (Ritchie et al, 2013:4). Philosophies about reality can be divided in different ways. Broadly, social science has been shaped by two ontological positions – objectivism (also known as realism) and constructivism (or relativism). Objectivism “implies that social phenomena confront us as external facts that are beyond our reach or influence” (Bryman, 2012:32). This position implies that the truth about the world is factual, stable and unchanging, and exists independently of a person’s belief or understanding of it. Alternatively, constructivism implies that “social phenomena … are not only produced through social interaction, but that they are in a constant state of revision” (Bryman, 2012: 33). Constructivists believe that truth evolves, is changed by experiences, and is therefore negotiable and unstable. Also known as ‘relativism’, this position implies that reality is fundamentally dependent on the mind and through socially constructed meanings (O’Reilly & Kiyimba, 2015).

A researcher’s ontological beliefs (about the nature of reality) might influence the ways in which research is carried out and the relationship (epistemology) the researcher believes they should have with the subject being studied (Kuhn, 1963; Bryman, 2016).

Epistemology is concerned with “the nature of knowledge and how it can be acquired” (Ritchie et al, 2013: 24). The two main epistemological considerations are positivism and interpretivism (Bryman, 2016). Positivism is often associated with the objective ontological position that the knowledge of the world is derived from facts, separate from our interpretations and descriptions of it. Thus, research is often carried out independently from the researcher in a controlled and standardized way so that the facts can be collected and analysed in an objective way (Flick, 2014). This enables the testing of hypotheses and theories and allows

for the generalisation of results, similar to methods used in natural sciences. In this instance, the researcher tries to remain ‘at a distance’ from the data.

Conversely, the term ‘interpretivism’ is used to describe an epistemology that contrasts with positivism (Bryman, 2012). For social research, interpretivists argue that statistical natural science methods are inappropriate, as a researcher has to understand and interpret human behaviours and perceptions. It is because interpretivism involves interpreting and observing the social world, that it is associated with a constructivism ontology, where knowledge is actively ‘constructed’ by human beings (Ritchie et al, 2013). Here, a researcher attempts to remain ‘close to’ the data, especially if they have insider status, in order to use their intimate knowledge of the subject matter to interpret subtle cues.

At a personal level, having worked within outdoor education for over 30 years with a diverse range of ages and abilities, I fully appreciate the subjective nature of outdoor adventure experiences. Endorsing Bull, Hoose and Weed (2003) who convincingly show that all leisure is in the mind of the participant, what is perceived as adventure and risk to one person, may be a completely different experience to another, depending on a number of factors (their previous knowledge, experience, skills, self-confidence, self-esteem, the environment, the weather, support from peers etc). As this project is investigating individual perceptions, that by their very nature, are likely to be different, I am inclined to agree with the interpretivist approach of a world that is socially negotiated and in order to unearth and interpret these individual perceptions, I recognise the need to remain close to the data for this study.

As a kinaesthetic learner, my conceptualisation of ontology and epistemology is illustrated diagrammatically in Appendix 6(131).

3.2 Methodological Approach

The two main research strategies used in social research are broadly divided into **quantitative** and **qualitative** (Bryman, 2016), which are based on the two different ontological and epistemological differences as previously described (see Appendix 6: 131).

The quantitative 'world view' is that ontologically the world is fixed, stable and factual (objectivism). Driven by facts, data and numbers, the aim of a quantitative approach is to test a pre-determined hypothesis and produce generalizable results (Marshall, 1996). Therefore, epistemologically (the theory of knowledge and the way in which it is represented), this positivist approach is **data driven** and seeks to uncover data in a scientific manner using instruments, numbers and measurements.

Conversely, a qualitative approach has an ontology that is unstable, negotiable and changeable (constructivism). It is defined as "a naturalistic approach that seeks to understand phenomena in uncontrolled, context-specific settings" (Hoepfl, 1997, Neutens & Rubinson, 2002). The epistemology of a qualitative approach is **data informed,** using words and observations to express opinions, attitudes and beliefs. This 'interpretative' data is captured through interviews, focus groups and film / pictures, which are analysed to generate themes, hypothesis and knowledge. A qualitative researcher will become immersed in the data, which is sometimes referred to as "intimacy with the data" (Ponterotto & Grieger, 2007: 415), in order to collect, analyse, interpret and present the results. As a caver with a desire to remain close to the data in this study, the qualitative approach was deemed most appropriate as it would enable me, as the researcher, to explore and understand perspectives from the inside, i.e. "from a member's perspective" (Flick, 2014:163). As a fellow caver (and insider

researcher), being accepted by the group was of significant importance to this study, as participants were able to share their perceptions and opinions freely, and I was able to understand and interpret any subtle nuances of behavior or terminology used (Hesse-Biber & Leavy, 2011). During my site visits, the conversations between participants would often be focused on the project, i.e. digging, capping, blasting, shoring-up, surveying, geology, bad air, rainfall, diverting water etc., all of which were topics and terminology I am familiar with. My presence was always welcomed by the group as I was regarded as a competent pair of hands, and of use to the team – i.e. I could help the team move more spoil to the surface and progress further with the dig! The value of being an insider researcher is also highlighted by Stenbacka, (2001: 553) who claims that the insider qualitative researcher brings "valuable ingredients to the process and also continuously reflects upon the phenomenon under study while proceeding in the process of generating understanding". In this case study, this valuable insight, and acceptance by the group, enabled access and opportunity for greater understanding and interpretation of this phenomena. The group were immensely proud of their digging efforts in this cave, particularly since other caving clubs had previously attempted to dig here and had subsequently given up. As a caver, I was welcomed by the group and actively encouraged to get involved in the dig from the first day I visited the cave (on the surface as well as underground), so as to get a good understanding of the extent of the project. Being able to see for myself the result of their hard work, and hear the stories of their achievements / overcoming problems, such as blasting sections of passage, lowering the floor, supporting the roof / side walls etc., brought the project more 'alive' to me as the researcher and also helped me to interpret their stories and responses later on.

The concept of the insider researcher and consideration of its advantages and disadvantages will be explained further later on in this section.

A summary of the contrasting characteristics of quantitative and qualitative research are provided in Table 2 below:

Quantitative	**Qualitative**
Deductive	Inductive
Studies well known phenomena	Often studies unknown or little-known phenomena
Testing of hypotheses and theories	Development of hypotheses and theories
Conducted in controlled settings	Conducted in naturalistic settings
Large number of subjects	**Small** number of targeted participants
Standardized **numerical data collection**	**Textual, audio and visual data collection**
Data gathered first, then analysed	Data gathering and analysis occur simultaneously
Statistical analysis	**Content (text, audio and video) analysis**
Explore outcomes due to treatments, manipulations and outcomes	Explore complex issues and interactions between humans, reasons for outcomes and processes.

Table 2: Characteristics of Quantitative and Qualitative Research (Adapted from Harris et al (2009:88).

Taking this theory together to create something more meaningful, the aim of this project is to investigate **perceptions** of older adults, a qualitative approach was chosen as it enables the use of focus groups and in-depth interviews, to explore perceptions, beliefs and opinions, and identify potential themes (arising from unstructured or semi structured responses). Given the aims of this project, it was recognised that a quantitative approach, that enables fixed responses through on-line polls, systematic observations, measurements and numerical data would

not generate the data required. Arguably, the reliability of a quantitative approach is dependent on the measurement or instrument being used and could be described as being more objective than a qualitative approach as it provides observed data, and may therefore be more generalizable. However, since it is not the intention to generalise the results of this study, but rather to work closely with participants in order to explore perceptions and beliefs of this hard to reach group, the qualitative approach was deemed most appropriate.

Although the qualitative approach is subject to bias, this is fully acknowledged from the outset and inevitable, given the type of data required for this research, i.e. opinions, attitudes and perceptions of participants. There has been a rumbling debate within research methods for a number of decades regarding the trustworthiness of both methodological approaches (Nagel, 1986, Smith 1983, Guba & Lincoln, 1989), particularly as investigators in social phenomena or individual psychological phenomena have questioned the application of a numerical approach in the articulation of human perceptions, beliefs, attitudes and opinions (Sale, Lohfeld & Brazil, 2002). However, whilst it is useful to acknowledge this debate, what is more appropriate perhaps is to consider each approach as having a different set of 'tools' (Carey, 1993). On a personal level, I likened this to selecting the right equipment for a mountaineering expedition, whereby each piece of equipment or tool carried has been designed and selected as the right tool for the job. There would be little value in carrying equipment on an expedition that is not fit for purpose or capable of tackling the task at hand. I therefore spent time investigating the research 'tools' available to me (as I would spend time planning an expedition) before setting off on this new and exciting journey! On further investigation of the tools available, it became apparent to me that if a researcher sets out to quantify something as a volume / weight / height /

speed, (all of which can be measured), a mathematical approach would logically seem to be the most appropriate method to gather the data and analyse and represent the results. However, if the aim is to uncover and represent participant's opinions, attitudes and beliefs, words might be considered most appropriate to describe those phenomena. When considering which approach to use, the question for the researcher should therefore be, which approach is most appropriate for the task (as the mountaineer selects the right tool for an expedition). As the aims of this study are investigating *perceptions* of older cavers, a qualitative approach was deemed to be the most appropriate approach to apply, thereby enabling, what might be considered, a 'hard to reach' group to have a 'voice'. The decision to apply a qualitative approach is reinforced by Denzin and Lincoln (2011:3) who acknowledge: "qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them".

Quantitative approaches tend to seek **statistical** generalisation whereas qualitative invite **analytical** generalisation (Yin, 1989), in order that any findings can be transferred to a local condition / context. Since this project is fundamentally exploratory work, seeking unstable data, the aim is not to produce generalizable results. Rather, this study is concerned with a case study of a group of older adult males and their relationship with caving, and for these reasons, a qualitative approach was selected.

The small sample size of qualitative studies often leads to criticism of generalizability and validity (Sykes, 1991). However, this was recognised from the start of the project and fully acknowledged and accepted that results would not be generalizable. This supports Yin's (1989) claim that because of the small sample size used in a qualitative study, the results are intended to be general in

respect to **theory**, rather than population. It is also the aim of this exploratory work to establish a platform to determine the value of any deeper and or wider study, which I will refer to again later in the discussion. It should also be considered that there are increasing criticisms of the practice of extrapolating data for generalisation, as what is commonly referred to as the 'big data' approach, is also characterised by big data blunders and mistakes (Kugler, 2016).

It is important to note that there are inconsistencies for both quantitative and qualitative approaches, but both have a degree of rigour in what they do. A researcher needs to consider both reliability and validity in order to assess the objectivity and credibility of the research. Validity relates to the honesty and genuineness of the research data (i.e. are the findings an accurate representation of the phenomena being studied?), while reliability relates to the reproducibility and stability of the data (Anderson, 2010). In order to address reliability and validity in this study, the research design and terminology used has been subject to a number of checks and balances throughout, primarily through the engagement of critical friends. A critical friend is "a trusted person who asks provocative questions, provides data to be examined through another lens and offers critiques of a person's work as a friend" (Costa & Kallick, 1993: 50). For this study, two critical friends were selected and utilised throughout. It was a strategic decision to employ one male and one female critical friend in order to overcome potential problems of bias (Zeera, 2001). An 'insider' critical friend, a caver, was selected for their shared background and understanding of the context for this study (Papadatou, Papazoglou, Petraki & Bellali, 1999) and an 'outsider' critical friend, with an occupational health background selected to overcome any 'critical disability' (Greenleaf, 2002). Not only do these critical friends ensure that the opportunity for critical disability is reduced, (since they bring checks and

balances to my thought processes), but they provide validity by ensuring that the story that is told is believable and accurately represents the stories that were transmitted.

Reliability is commonly a major criticism of qualitative research because of the subjective nature of the data collected, the integral role of the researcher in the generation of the data and the difficulty in replicating the context, situation, events, conditions and interactions (McLeod, 2017). The reliability of a qualitative approach is dependent on the skill of the researcher and the clear transparency of the process, so that another researcher might replicate this at a later date. Working closely with my supervisory team and critical friends throughout, and by providing a clear transparent description of the process will bring a degree of rigour to this research and enable the process to be repeated by fellow researchers. This supports Stenbacka's (2001:552) claim that a "thorough description of the whole process, enabling 'conditional intersubjectivity' (Edfeldt, 1996), indicates good quality when using a qualitative method".

It has been argued by Harris et al (2009) that qualitative research can be more time consuming and labour-intensive than quantitative because of the detailed data gathering and observation required, and this often results in the research utilizing a smaller sample size. However, when using thematic analysis, it can be argued that a small sample, as employed in this project, can provide a rich and in depth data source. It was a strategic decision to use a small sample group for this study, supported by Reid et al's (2005) suggestion that 'less is more', as fewer participants examined in greater depth is regarded as preferable to a broader, shallow and simply descriptive analysis of a larger sample (Hefferon & Gil-Rodriguez, 2011). Whilst a random (or probability) sample is generally regarded as the most rigorous strategy to sampling for statistical research, it is

commonly viewed as inappropriate for qualitative research (Ritchie et al, 2013), although some argue that is it possible (Bryman, 2012). In this project, a random sample is not necessary or appropriate as a sample that is statistically representative of the population is not required, and the results will not be generalized.

3.3 Sample

The sample group consisted of four male cavers, aged between 65-74 years old. I was introduced to the group by their 'leader' / co-ordinator (Alf), who I met through a caving club of which we are both members. Having been on a number of caving trips with Alf previously, he was aware of my skills and competence in an underground environment, and after a conversation over a beer at a club meet, he kindly invited me to join the dig with his group to find out more. The decision to select a small sample group for this project is supported by Smith et al's (2009) recommendation of utilising between three and six participants for an undergraduate or master's level interpretative study, providing a deeper level of analysis and importantly for myself, a manageable study for a novice researcher.

The 65-74-year-old age range was selected for this study as it followed Dytchwald's (1999) categorization of 'young-old' and was applied by Hickman's (2015) study of older rock climbers, thereby enabling comparisons between the perceptions of older adults participating in outdoor adventure sports to be made. The opinions, perceptions and beliefs obtained from this study will provide a particular male voice, one which is largely under-represented and regarded as 'hard to reach' in terms of coping with health related adversity and resilience.

The sample group for this research was a small convenience and purposive (Mason, 2002; Patton, 2002) sample, strategically selected in order to meet the aims of the study and to generate the data required. In selecting a purposive sample, I actively selected the most productive sample to answer the research question (Marshall, 1996). Although using a random sample might enable generalization and avoid any systematic bias (Denzin & Lincoln, 2011), this was deemed unworkable within the constraints of this study and importantly, a random sample would not provide the data required of this study from this particular 'hard to reach' group. A random sample would also be unrealistic and impractical due to the low numbers, availability, and location of cavers over 65+ years of age within the UK. The selection process employed for this project therefore supports Bryman's (2012) acknowledgement that sample 'units' for qualitative research are selected because of particular characteristics which will allow a detailed exploration and understanding of the central themes and questions that the researcher wishes to study. In this case, the sample were indeed selected with the research goals in mind (i.e. all participants had to meet the criteria of being between over the age of 65 and partake in caving), a strategic decision, in order that the aims of the study could be met, rather than providing generalization.

It is recognised that a potential threat to the validity of any research project is researcher bias, and in particular, in qualitative research, which requires flexibility rather than algorithmic responses. Quantitative researchers can be so determined to remove 'researcher bias' that the research becomes highly focused on theory and hypothesis (McLeod, 2017) and inapplicable to real world situations. Whereas in qualitative research, it is argued that there is the potential for bias from selective observation and recording of information, and a researcher allowing their own personal views to impact on the interpretation of the data and

how the research is conducted (Johnson, 1997). However, rather than viewing researcher bias as a threat, it can instead be regarded as a strength, in that when qualitative research is conducted by an insider researcher, their 'insider' knowledge can be employed to the advantage of the study. This is demonstrated by the researcher's understanding and interpretation of the subtle nuances of language and behaviour that only an insider could. In this case study, being accepted by the group as a fellow caver provided the researcher with a valuable insight into the activity and enabled a greater understanding of what caving meant to this group of older adults. When dealing with 'hard to reach' groups, a realistic research approach to a realistic research problem is required. As Jacobs (2008) acknowledges, if researching an innovative subject matter, a researcher may need to use innovative ways to generate data.

This research project is designed as a 'case study' and therefore is exploratory in nature. It will explore the potential for deeper investigation in this area, rather than provide generalization. A case study is commonly associated with qualitative research, since in-depth data is gathered relative to a single individual, program or event, for the purpose of learning more about an unknown or poorly understood situation (Leedy & Ormrod, 2005). The distinguishing features of a case study include focusing on an individual unit (Flyvberg, 2011; Stake, 2008), a detailed and intensive study (Bryman, 2012), studied within its real-life context (Yin, 2009), and is occurring in a bounded context (Miles & Huberman, 1994). Case bounding or 'binding' (Njie & Asimiran, 2014) is significant in that it helps provide boundaries or parameters to a case in order that greater attention or focus is paid to that particular study. Baxter and Jack (2008) recommend three ways of binding a case study to avoid making the scope of the research project too broad: a) by time and place (Creswell, 2003); b) time and activity (Stake 1995); and c) by

definition and context (Miles & Huberman, 1994). For this particular case study, the bounds were commanded by the age of the sample (65 – 74 years of age), activity (i.e. cavers), gender (i.e. male), time (to be completed within the time constraints of this project) and place (i.e. accessible to myself as the researcher).

Flyvbjerg (2006) acknowledges that one advantage of research involving large samples is breadth, but this can often result in lack of depth in the data gathered. For a case study, Flyvbjerg claims, the situation is the reverse. It is because of the small sample selected for this study and the desire to interpret the data / perceptions in depth, that the case study approach was deemed most appropriate for this project. Despite concerns over the lack of rigour of case study research (Yin, 2009), and the lack of organizational structure to guide the researcher (Thomas, 2011), it was decided that the case study would be the most appropriate approach as it would allow an intensive analysis of the data, gathered in its natural context, with no manipulation of variables or quantification of data. The appeal to employ a qualitative approach through a case study, was further enhanced by this 'naturalistic' approach, and the desire to study real people in natural settings rather than artificial isolation (Marshall, 1996).

As a caver (and therefore 'an insider') and an 'opportunist' researcher (Lois, 2003; Anderson, 2006), I was able to make use of the close relationship which evolved in my role as researcher and the area of study. There are many advantages and disadvantages to being an 'insider' researcher (i.e. being seen as one of the group) as opposed to being an 'outsider' researcher. As described previously, being accepted as an 'insider' increases the likelihood of participants sharing their perceptions and opinions freely and the researcher more likely to understand subtle nuances of behavior or terminology used (Hesse-Biber & Leavy, 2011). However, by being an insider there is a risk that the researcher can become so

involved in the subtle nuances that the objectivity of the researcher is lost. In order to address these concerns re objectivity, checks and balances were employed by the use of two critical friends throughout the process. Although it could be argued that an outsider researcher can provide greater objectivity, it was recognized that this does not provide the interpretative framework that an insider can bring to the interactions and data analysis. When studying close, tight-knit groups, it was deemed more likely that an insider researcher would be offered access to what could be considered to be privileged, personal and sensitive information. Being accepted into this group of older male cavers has been hugely significant to this research project, providing a valuable insight into their natural environment, the relationships that exist between the group members and any cultural barriers within the activity.

Cave exploration, and cave digging in particular is not without an element of risk, and the safety of the members of the group and anyone that aspires to join them is paramount. Key to my acceptance by the group was my relationship with the group ‘leader’, who could vouch for my caving ability, having caved together previously, and both being members of a respected Yorkshire caving club. On my second visit to the dig site, I felt truly accepted as an ‘equal’ as I was tasked with ‘rigging’ the pitch with the ladder, thereby trusted with the responsibility and safety of the team members and accepted as an ‘honorary’ male within the group!

3.4 Data Collection

The initial plan was to use a combination of focus groups and interviews in order to gather data for this research. The focus groups would provide the opportunity for general perceptions within the group to be gathered, then interviews would

allow more focused levels of enquiry to be pursued. However, this process of data collection was revised due to the availability of participants and the time constraints of the study. Many books and journals on research methods explain the process of data collection in a controlled and linear or ‘sterile’ environment, but transferring and translating these mechanisms into a real environment requires a broad degree of adaptation (Jacobs, 2008). Furthermore, Jacobs argues that when new and innovative lines of enquiry are sought, then new and innovative adaptations to existing methods are necessary as we evolve in a world of more complex and simultaneously fractured, yet connected, knowledge. Additionally, transferring idealised models of research methods required their adaptation to the tightly ordered interpersonal dynamic that existed within this ‘micro-world’ of older adult male cavers.

Although the intention was to start with a focus group, due to difficulties in getting all participants together, a questionnaire was used instead. Initial meetings showed that as the dig was a highlight of participants’ social and physical week, they were keen to attend to the business of caving rather than generating data, however accommodating they might seem. In order not to intrude on proceedings, by completing questionnaires on arrival at the dig, it enabled participants to maximise the time available whilst waiting for other members of the group to arrive. However, it was soon discovered that for some participants, completing a questionnaire was an onerous task, particularly when it is consuming precious digging time, or even the prospect! Participants tended to furnish short answers or even prefer to provide the answers verbally in order to get underground and dig as soon as possible. It was because of the short or incomplete answers given on the questionnaires, (due to the desire to engage in

their chosen activity) which resulted in my decision to use interviews in my second data collection.

From the very start of the research project, the intention was to collect data in context, in order that participants' channels of receptivity were open. By being in this familiar environment, it was believed that participants would provide their most honest responses. However, as digging is an intensely alternative lifestyle and the participants invest significant time, effort, energy and imagination in being there, it quickly became apparent that when they were at the dig, they not surprisingly wanted to maximise this time and go digging! This concept will be returned to in the Discussion under the heading of 'Serious Leisure' (83).

Researchers therefore need to be highly sensitive to this, and when undertaking further research projects with older adults, a researcher must be prepared to recognise that a questionnaire can be quite time consuming, requires participants to read and write and have a certain amount of dexterity. Some older adults may find this challenging and due consideration must be paid to this.

When designing and implementing research methods, a researcher might experience a clash of cultures between their topic and the research method chosen and must therefore find some method of combining the two, which might be innovative and new (Jacobs, 2008). In attempting to collect data in context (i.e. whilst underground), I quickly discovered that a notebook and pencil were completely impractical and unworkable due to the wet, and extremely muddy conditions of the cave environment. A digital voice recorder (DVR) in a waterproof case also proved to be of limited success as any conversation was difficult to transcribe due to the quality of the recording and the muffling of sounds created whilst moving around the cave. On one occasion, I placed the waterproof case (containing the DVR) on a piece of string around my neck, and under my caving

suit for protection - this caused some amusement as I inadvertently pressed the ‘play’ button whilst negotiating an awkward tight squeeze in the cave!! When used in-situ in a controlled and safe environment, these methods of data collection (such as pen and paper or a DVR) are completely appropriate, but due to the nature of the time and place of this study, I realised that an innovative approach was clearly required (Jacobs, 2008). A third attempt at capturing data underground was tried using a waterproof ‘Go-Pro’, which was positioned first on my chest and then on my caving helmet (see Appendix 7:132). It was my belief that a film would help to illustrate to non-cavers what this challenging environment really looks like. The Go-Pro mounted on the helmet provided a higher quality film than the chest camera, however, not being used to having a camera mounted on my helmet, it proved extremely challenging to film underground without knocking the camera on the cave roof / walls, and covering it in mud. The camera mounted on a chest harness was of limited success as the view often became obscured when negotiating small passages in the cave and having to turn sideways or flat on my back / front. For future reference, it is recommended to carry spare batteries for the Go-Pro as these were quickly depleted when filming underground. It is also worth considering that when analysing the Go-Pro film footage afterwards, it became apparent how much I move my head subconsciously when underground, which made watching and analysing the film very difficult, whilst coping with feelings of motion sickness! For future reference, I would recommend practising filming underground and minimising head movements to help address this. These adaptations to my data collection methods illustrate the realities of operating in a new environment, and how I have critically responded to dynamically changing situations, thereby developing my skills as a researcher (the first aim of this research project).

3.5 Data Analysis

For the reasons outlined above, it was the data captured by questionnaires and interviews (which took place at the cave site, above ground rather than underground) that were used. Therefore, an appropriate tool to analyse this particular data (i.e. words / perceptions) was required. Boeije (2002) suggests that multiple interpretations of data analysis can be confusing and therefore the process of investigating and identifying the most appropriate data analysis tool is an important part of my development in this process as a novice qualitative researcher. A more detailed consideration of my approach to analysis can be found in the subsequent chapter entitled ‘Findings’ (67).

3.6 Ethics and Data Protection

Full consideration was given to the ethics of this project in order that participants were treated equitably and with freedom from prejudice. Ethical approval from UCLan’s Ethics Committee was sought prior to any research taking place. During the 12 months’ prior to starting this research project, considerable time was spent planning and sharing ideas with my supervisor / critical friends / colleagues / cavers / fellow researchers and practitioners. This enabled me to conceptualise and develop my ideas as well as gain a better understanding of the research process. Potential ideas were discussed and the strength of the response supported further consideration of the themes. The development of ideas is represented in more detail in Appendix 4 (125). It has been over 20 years since I have undertaken any research, and therefore I found this time spent in reconnaissance extremely valuable. The thorough planning process gave me the

confidence to submit a detailed research proposal and ethics application, both of which only required minor amendments for approval.

Participants were given a Participant Information Sheet (see Appendix 8:133) about the research project beforehand so that they were fully aware of the process and methods to be used to collect data. Participants confirmed their approval to take part by signing an 'Informed Consent' form (see Appendix 9: 137). Participants were made aware that focus group discussions, and interviews would be recorded, transcribed and analysed. Participants were informed that care would be taken to ensure confidentiality and protect participants' anonymity throughout. Participants were also informed that they were free to withdraw from the study at any time without giving a reason and without consequence. Safeguarding confidentiality, no representation of the data will be used to reconstruct the identity of anyone taking part (British Psychological Society, 2009; Bryman, 2012).

Questionnaire (See Appendix 10:139) and interview questions were checked by internal and external checkers (critical friends) before use. The data collected (including recordings, interviews, transcripts, questionnaires, film and photographs etc.) are stored electronically on the University Network, and therefore protected by University malware and established security system. After completion of the project all data will be stored on the University network in encrypted zip files for five (5) years and then destroyed in accordance with university policy.

As a novice researcher, I have worked closely with my Director of Studies and other colleagues within the School of Sport and Wellbeing also researching 'active ageing in adventure sports' to ensure due process and procedures were followed. Talking to colleagues from other institutions involved in the study of

gerontology, and presenting my conditional work at conferences was invaluable in helping shape my thoughts and in appreciating the standards of practice adhered to by fellow researchers. As a novice researcher, this has enabled me to gain a greater understanding of the research process, which fulfils one of the primary aims of this research project. In the discussion, I will illustrate how personal responses have impacted on me, as the researcher, and in turn impacted on my conceptualization of the data.

3.7 Conclusion

This chapter discusses ontological and epistemological considerations, the methodological approaches used for this study, the research design, sample, data collection and data analysis along with ethical issues and data protection assurances.

CHAPTER FOUR – Findings

4.0 Introduction

Throughout a research project, a researcher will strive for the systematic identification, acquisition, analysis, representation, discussion and overall management of the collected data, in both its primary and secondary form (Miles & Huberman, 1994). As described in the methodology, this project is using a qualitative approach, with the data being captured in the form of words representing perceptions and beliefs. This chapter will explain how the main themes of the project were identified and developed, illustrating how raw data, gathered from questionnaires and interviews, can be transferred into themes, supported by their conceptual value and their relationship to the aims identified at the outset.

4.1 Data Analysis

Various data analysis options were considered for this research project such as colour coding (Bolton, 2010) and CAQDAS (Computer Assisted Qualitative Data Analysis System). As a novice researcher, with demands on my time from a full time position at UCLan, and increasing family commitments, I limited the choice of data analysis to these two options. This strategic decision is supported by Howitt and Cramer (2016) who suggest that novice researchers should not be too ambitious with their selection of data analysis tools.

For this research project, I chose to use manual data analysis rather than CAQDAS for the following reasons:

- Given the scale and scope of this research project, conducted alongside a full-time post at UCLan, time was a critical element in my decision making. Thus, the time that would have been invested in learning how to use appropriate software was spent manually analysing my data.
- CAQDAS is more applicable to managing large volumes of relatively impersonal data and is therefore of limited value.
- As an insider novice researcher, I want to remain as close to the data as possible, so that I could make interpretations with the assistance of my critical friends.
- CAQDAS provides an automated recognition of patterns. However, these patterns might not be relevant or appropriate to the study. For example, CAQDAS will not recognise facial expressions / attitudes or the urgency expressed by participants that they desperately want to go digging!
- As the data collected is personal insider data, an insider's degree of expertise is required to interpret the data effectively. A manual data analysis will allow me to utilise my insider knowledge, and interpret subtle nuances of language and behaviours.

Manual qualitative data analysis can be considered a time consuming process, as it involves the researcher manually reading the data collected, organising it into categories and sub categories and then identifying any links or themes between the data. However, a significant benefit to this method is that it helps connect the novice researcher with the data. This is supported by Bolton (2010), who suggested that this method allows the researcher to remain close to the data as they read and re-read the raw data, which helps to develop a better

understanding and interpretation of the potentially very personal and sensitive data.

There are several ways to manually analyse data, which include sentence coding (Denzin & Lincoln, 2000), number coding (Denzin & Lincoln, 2000) and colour coding (Bolton 2010; Howitt and Cramer, 2016).

It was a strategic decision to use a manual handling data analysis tool, and in this case Bolton's (2010) Colour Coding Thematic Analysis, as this would enable me to use my insider knowledge to the advantage of the study, by remaining close to the data and able to interpret the subtle nuances of language and behaviours. I was mindful of the need for a systematised approach and Bolton's (2010) colour coding analysis was deemed to be a simple, visual and effective sorting process, appropriate for managing small quantities of data for an inexperienced researcher. Howitt and Cramer (2016) support the use of colour coding analysis by acknowledging that it is simple to use for a novice researcher and enhances the learning of the research process.

Stage one involved the data being gathered using questionnaires (see Appendix 10:139) and semi-structured interviews, which were then transcribed for the manual colour coding data analysis (see Appendix 11:143, for interview transcriptions). At stage two, words (raw data) that were linked by a common theme were identified using different coloured highlighter pens, which enabled me to sort the text into different categories. Stage three allowed the data to be categorised and organised into 'lower order' themes, which were subsequently grouped together into 'higher order' themes (stage four). I selected this method as my preference is to sort and see patterns or connections visually. Thematic analysis is "a method for identifying, analysing and reporting patterns (themes)

within data" (Braun & Clarke, 2006:79). An example of the manual data analysis using colour coding is provided in Table 3 below:

Example Raw Data	Lower Order Themes	Higher Order Themes
Planning Surveying Project Drilled Capping	Project / Transfer of Technical skills	*Serious Leisure*
Team work Closer together Enjoyed Camaraderie Get on well	Teamwork / Socialisation	

Table 3: Colour Coding to Identify Lower and Higher Order Themes.

For further examples of the colour coding analysis used to identify lower and higher order themes, please refer to Appendix 12 (146).

Data was anonymized as a requirement of ethics, and in order to create a believable story participants were given random pseudonyms. Since this is a qualitative study, it was deemed more appropriate and 'believable' to use a name rather than a number when referring to a participant. This was a conscious decision to represent a person / perception from a real life experience, as opposed to referring to an individual by a number, as is usual in a quantitative approach. This presentation of meaningful story has been identified as central to qualitative research (Muncey, 2005), and includes the need for believability (Ellis, 1999), empathy with participants or 'actors' in the story (Sparkes, 2002) and evidence of clear social processes at work in the storyline (Ellis, 2000).

Each theme was assigned a specific colour code, with supporting examples, stating the data source and the conceptual value that this provides to the study.

The data analysis process followed is illustrated conceptually in the diagram below:

Figure 8: Manual Data Analysis Process

This process was followed twice, initially to gain the themes from Phase 1 (the questionnaire), which were then used to underpin the structure of the semi-structured interview questions carried out as Phase 2, subsequently helping to identify the areas for further exploration and critical development. This process of data organisation to identify trends and patterns, which are then tested through more data collection, reduction, organisation and interpretation is supported by Sarantakos (1998).

4.2 Intellectual Development

To illustrate the intellectual and conceptual development throughout this project, I have included the table below to show the development of knowledge from the very start of the project to the data analysis and write-up stage.

Although this table format may portray this as a linear process, it should be recognised that there was continuous research and an interative refinement to the literature review and research process throughout. As themes emerged at each stage of data collection, and following the critical feedback received from academic / professional conferences, this resulted in further reading and the evolution of knowledge. It should also be recognised that there was a need to remain flexible and adaptable throughout (Jacobs, 2008), as each phase informed and had an impact on the next. The methodology, the methods used for

data collection, as well as the raw data collected in phase 1 informed the methodology, data collecting methods and data collected in phase 2.

Pre 2016	• 30 years of experience of caving (personally and professionally), member of 2 caving clubs and North Wales Cave Rescue • Awareness and admiration for the active 'older' cavers involved in digging / exploration / voluntary roles within clubs.
Pre 2016	• Awareness of UK's 'ageing' population, potential impact of this on Health Services • Awareness of research within UCLan regarding older adults and outdoor adventure sports (specifically rock climbing and sea kayaking).
Pre 2016	• Met Alf at a caving club social event and became aware of the digging projects with his caving friends (all of whom are retired from work and over the age of 65). I was invited along to a dig to find out more. • Visit the dig site, meet the team, inspired and in awe of the dedication and effort of these older cavers, keen to investigate further what caving means to them and the role of caving in the ageing process.

Feb 2016 onwards	• Create a conceptual diagram of potential areas to include in the Literature Review, and share with critical friends
	• Develop further knowledge and enhance understanding in the areas of:
	  • The changing demographic in the UK (Cracknell, 2010, Dytchwald, 1999, Dytchwald & Flower, 1989, Boksberger and Leasser, 2009)
	  • Adventure and risk (Mortlock, 1984, Ewert & Garvey, 2007, Boyes 2013)
	  • Ageing, leisure and health and wellbeing (Menac, 2003, Nimrod, 2007, Payne, Mowen & Montoro-Rodriguez, 2006, Gibson & Singleton, 2012)
	  • Ageing and Serious Leisure (Stebbins, 1982, 1992, 2001, 2007, Heley & Jones, 2013, Brown, McGuire & Voelki, 2008, Lee & Payne, 2015).
	  • Ageing and outdoor adventure sports (Boyes, 2013, Howes, 2016, Ewert & Yoshino, 2011, Hickman et al, 2015)
	  • The allure of cave exploration (Gillet, 2002, 2013, Gemmell & Myers, 1952)
	  • Leisure and identity (Atchley & Barusch, 2004, McGuire, Boyd & Tedrick, 2009, Grant & Kluge, 2007)
	• Agree areas of inclusion in Literature Review with critical friends

Feb 2016 onwards	Develop and enhance knowledge of the research process • Methodology (Ritchie et al 2013, Bryman, 2016, Flick, 2014, Yin, 2009) • Sample selection (Smith et al, 2009, Dytchwald, 1999, Flyvbjerg, 2006) • Data collection / analysis
July 2016	• Design questions for data collection and distribute questionnaire in the field (phase 1) • Share findings and emerging themes with critical friends and at academic and professional conferences to obtain critical feedback • Revisit literature review
March 2017	• From data collected in phase 1 and critical feedback received, agree with critical friends the themes to be explored further in phase 2 (semi-structured interviews) • Design semi-structured interview questions and arrange date to carry out interviews with sample group • Visit site, now feel accepted as an 'honorary' member of the group. Carry out interviews, record and transcribe data collected for manual colour-coding analysis • Revisit literature review (including Stebbin's 2009, Nature Challenge Activities), methodology (Jacobs, 2008), and data analysis (Bolton, 2010, Denzin & Lincoln, 2000, Howit & Cramer, 2016)
July 2017	• Link words (raw data) by a common theme using colour coding in order to organize and categorize the data into 'lower order themes' • Group 'lower order' themes into 'higher order' themes, identifying exemplar data and conceptual value. • Share findings and emerging themes with critical friends and at academic and professional conferences to obtain critical feedback • Revisit literature review • Write-up thesis, drawing conclusions on research findings

Table 4: Intellectual Development Throughout the Research Project

An example of how one of the higher order themes (Serious Leisure) was established, together with its exemplar data and conceptual value, is illustrated in Table 5 (75). It should be taken into account that I became aware of the concept of 'Serious Leisure' (Stebbins, 1982) from the research undertaken for my

literature review, and as a result of the raw data that emerged from phase 1 (questionnaire), I was able to identify and explore this theme further in phase 2 (semi-structured interviews). Given my knowledge and awareness of the 'serious leisure' theoretical framework, it could be argued that this might have had an impact on the thematic analysis that followed. Braun and Clarke (2006:84) claim that "a 'theoretical' thematic analysis would tend to be driven by the researcher's theoretical or analytical interest in the area", as opposed to an 'inductive' thematic analysis which is defined as "a process of coding the data *without* trying to fit it into a pre-existing coding frame or the researcher's analytic preconceptions" (Braun & Clarke, 2006:83). Although I was aware of the concept of 'Serious Leisure', I used checks and balances such as critical friends and critical feedback from a range of conferences throughout the process to avoid any problems of bias.

In pursuing 'Serious Leisure' after the first data collection, I was also aware of Gray's (2018) advice that in selecting or developing a research topic, a theme from personal experience can be useful to support motivation through the life of the project. Applying newly learned theories to existing experience can also be a way to extend capabilities and skills and also to reduce confusion.

Example Raw Data	Lower Order Themes	Higher Order Themes	Exemplar Data	Conceptual Value
Planning Surveying Project Drilled Capping Scaffolding Shoring Problem solving	Project / Transfer of Technical skills	Serious Leisure	"I am reasonably handy at DIY so I am able to contribute to work aspects. E.g. scaffolding, shoring, and I am reasonably good at problem solving" "It's very important to our knowledge and it gives the caving community more passage to explore".	Caving, in the form of serious leisure enables older adults to transfer and maintain their skills, which in turn provides a continued sense of self-worth and identity
Team work Closer together Enjoyed Camaraderie Get on well Like mind	Teamwork Socialisation		"We knew each other vaguely, this has brought us closer together" "I like the camaraderie with people of a like mind on a project" "Feels good to be involved" "We get on well together and enjoyed doing the projects"	In project based serious leisure activities, participants spending time together solving problems intensifies social processes.

Table 5: Example of Data Analysis including Themes and Conceptual Value

For further examples of how the higher order themes were established together with exemplar data and conceptual value, please refer to Appendix 13 (148).

Ten ‘lower order’ themes were identified, and these were subsequently clustered into five ‘higher order’ themes. These lower and higher order themes are illustrated in Figure 9 below:

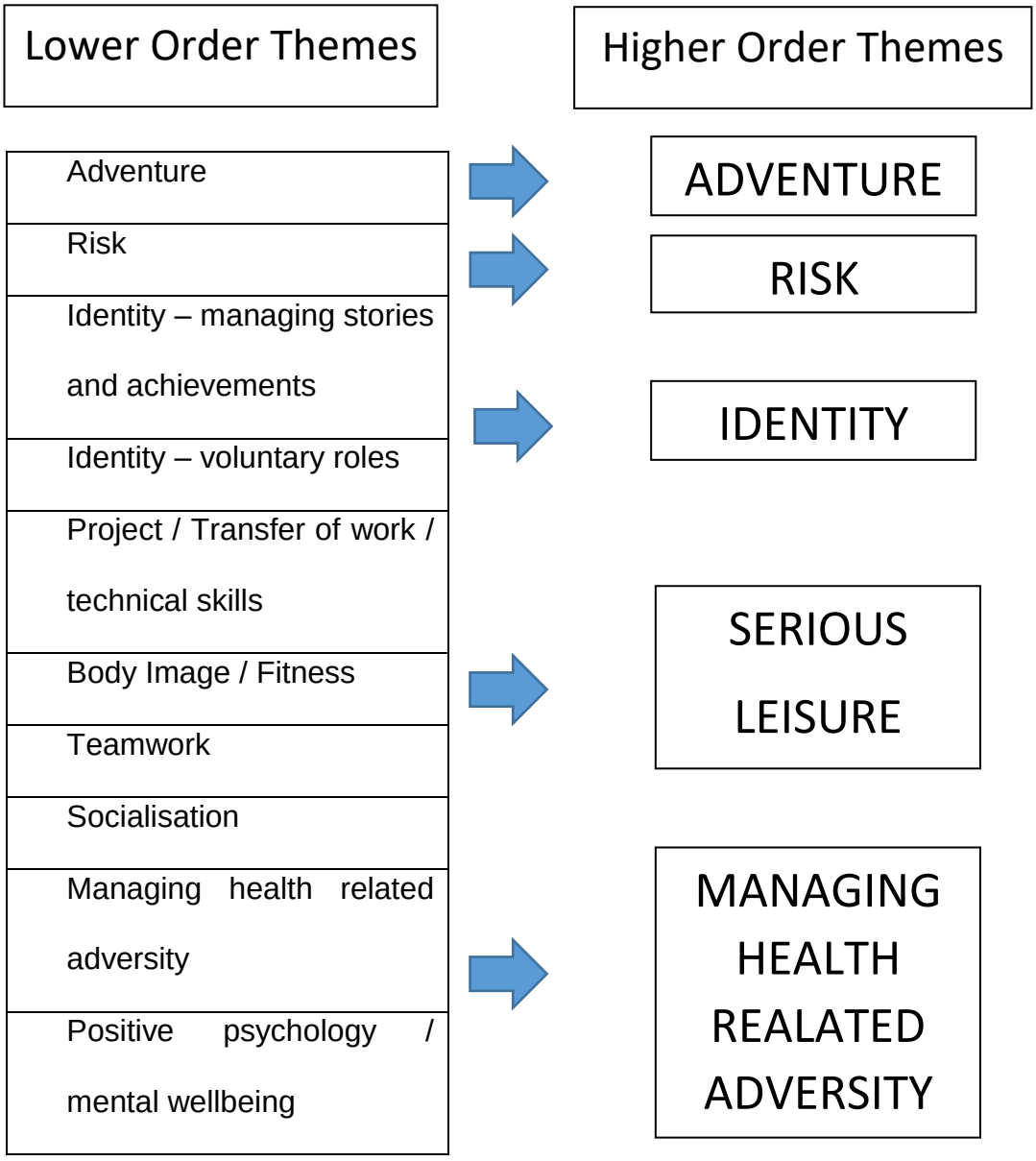


Figure 9: Identifying Lower and Higher Order Themes

These higher order themes were then shared with my critical friends, in order to bring checks and balances to my critical thinking. A critical friend is “a trusted person who asks provocative questions, provides data to be examined through another lens and offers critiques of a person’s work as a friend” (Costa & Kallick,

1993:50). A critical friend from the ‘in’ group (a male caver, aged over 65 years of age) was selected to ensure that the themes identified were ‘believable’ and a true representation of the stories related by the participants. In addition to this, by engaging a critical friend from ‘outside’ the group (a female occupational therapist, with a background in research, aged 40 years of age), I challenged my thinking and decision making, which in turn, helped overcome any ‘critical disability’ or inability to challenge (my own) assumed beliefs (Greenleaf, 2002). This critical friend was selected in order that they could speak honestly and constructively about any issues or concerns within my research and to contribute any views or interpretations from outside the group that I might not have considered. As suggested by Dahlgren et al (2006), the critical friend offers alternative paradigms and interpretations, and by challenging the researcher’s underlying assumptions, should help steer the researcher towards a deeper critical understanding (McNiff, Lomax & Whitehead, 1996). Although these checks and balances by two contrasting critical friends (of different age, gender, background and experience) does not enable me to generalize my findings to other groups, it does bring a degree of trustworthiness and transparency to the process being followed. Thus, other researchers might be able to apply a similar framework to their own research.

4.3 Conclusion

As shown in Figure 9, the five higher order themes that emerged from the data analysis process, which will be explored further in the discussion were as follows:

1. Adventure
2. Risk

3. Identity
4. Serious Leisure
5. Managing Health Related Adversity

However, due to the scale and scope of the Masters research project, in consultation with my critical friends, a strategic decision was made to only elaborate on two of these themes in the discussion, thus enabling deeper critical engagement with each. A comment on those themes critically de-selected will be made in the Conclusion (109).

CHAPTER FIVE - Discussion

5.0 Introduction

This chapter will revisit the aims of this research and provide an interpretation of the findings obtained and why this is relevant to this research, or to other research carried out in this area.

It is important to remind ourselves of the aims of the research at this stage:

1 Develop my skills as a researcher and my knowledge of the research process.

2. Make a contribution to theory through establishing a platform to understand ways that older adults conceptualise caving.

3. Make a contribution to practice knowledge through understanding ways in which this impacts on vocational employment.

The findings chapter demonstrated the way that data has been analysed, sorted and organised for interpretation with five higher order themes emerging, those in bold to be prioritised in this chapter:

- Adventure
- Risk
- Identity
- **Serious Leisure**
- **Managing Health Related Adversity**

Due to the scale and scope of this project, not all higher order themes could be included in this project and meet the demands of critical engagement at Level 7. In consultation with my critical friends, a strategic decision was made to only elaborate on the final two themes in the discussion and in doing so I will also show how the aims relate to each included theme.

Note: The data provided within the discussion will be coded accordingly: Alf (Q1) refers to Alf, Questionnaire, phase 1 of the data collection, and Ray (I2) refers to Ray, Interview, phase 2 of the data collection.

5.1 Ethnography and Autoethnography

According to Hammersley and Atkinson (2007:3), an ethnographic study "usually involves the researcher participating overtly or covertly, in people's daily lives for an extended period of time, watching what happens, listening to what is said and /or asking questions through informal and formal interviews, collecting data", in other words, research takes place 'in the field'. Van Maanen (2011: x) argues that such practice has been severely taken to task by some, and for many represents an "epistemological trial by fire". Nevertheless, he also maintains that there is "a difference between knowledge about something and acquaintance with the phenomenon" (2011:18) and engaging in this project not only enabled me to develop more informed insights into both caving and ageing but also afforded me the opportunity to extend my research capabilities and experience, a consideration also noted by Gray (2018:46). As previously described in the Methodology (49 & 50), in my role as an 'insider' researcher, I was able to collect data 'in the field', remain close to the data throughout, and with my experience and knowledge of caving, I was able to interpret terminology or subtle cues.

Throughout this discussion, text boxes have been included with reflective (auto-ethnographic) comments, which are extracts from my ‘reflective log’, as a fundamental decision to illustrate what I (as an insider researcher) observed and have learnt, thereby enhancing my knowledge and understanding of the research process and subject matter, and fulfilling the aims stated at the start of this project. This idea is endorsed by Holt (2003:18) describing auto-ethnography as a “highly personalized account where authors draw on their own experiences to extend understanding of a particular discipline or culture”.

In terms of auto-ethnography, the work reflects the basic tenets of the research method as articulated by Adams, Jones and Ellis (2015) in that I use my personal experience (as a caver) to describe other cultural beliefs, practices and experiences that might hitherto, due to over-familiarity, have remained unknown to me. This process, of making the invisible visible, highlighted to me that even in a world that we assume that we understand much remains un-perceived and underscores the need for researchers to constantly challenge their views of what is ‘known’.

Reflective comment:

Key to my role as an 'insider' researcher was being accepted by the group, as this allowed the older cavers to talk freely in the environment in which they felt most comfortable – underground. Fortunately, Alf, the 'team leader' could vouch for my caving ability, since we had caved together previously, and we were both members of a respected Yorkshire caving club. Despite being female in an all-male group, the fact I was an experienced 'caver' and deemed competent by Alf, I was warmly welcomed by the group when I joined them at the dig site on a number of occasions. There was clearly an unwritten, yet expected reward for the group by contributing to this research project … that I was another pair of useful hands to help with the work load for the day.

In return for completing questionnaires and interviews, I felt obliged (and happy) to help with the dig on my site visits and by doing so I could really appreciate the work involved and close relationship that exists between the group members. As a way of expressing my thanks to the cavers for giving up their time to help with the research project, I took cake for everyone to enjoy over lunch – this was well received by the group, welsh cakes proving to be the most popular and doughnuts less so! Looking back, I realise that my choosing to take along cakes might also have been an 'offering' to the group triggered perhaps by an unconscious perception of the tension between my roles as both an outsider and an insider. Aware that I shared the group's passion for being underground, I was also cognizant that part of me remained a researcher. Perhaps the cakes were an attempt to placate my own feelings rather than be the gift I thought they were!

It was on my second visit to the dig site, that I felt truly accepted as an 'equal' as I was tasked by Alf with 'rigging' the pitch with the ladder, thereby entrusted with the responsibility and safety of the team members and accepted as an 'honorary' male within the group!

5.2 Serious Leisure

The findings from this research have shown how a cave digging project in North Yorkshire is both stimulating and fulfilling to a group of older male cavers, requiring a combination of specialist skills, knowledge, and experience developed over a period of time. This fittingly fulfils the criteria provided for 'Serious Leisure', a concept described previously in the literature review, as "the systematic pursuit of an amateur, hobbyist, or volunteer activity" (Stebbins, 1992:3) and when participants spend significant time, effort and energy on the leisure activity (Brown et al, 2008).

Conveniently, Stebbins (1992) further identifies six ***key qualities*** for a leisure activity to be regarded as 'Serious Leisure': Perseverance, significant effort (mentally and physically stimulating), career paths (utilising skills and experience), unique ethos and identification, and durable outcomes such as self-enrichment, sense of belonging (Stebbins, 2010: 20). These key qualities will now be explored further in turn with examples of how this relates to the older cavers in this case study. In addition to supporting the theoretical framework of 'Serious Leisure', a further exploration of these key qualities will also illustrate how these older cavers are using caving to manage their health and age related adversity.

5.2.1 *Perseverance (*to overcome challenges and problem solving)

In this case study, a group of older cavers are venturing into areas that have previously never been explored before by man (or woman). This requires significant effort, determination and perseverance to overcome the various physical, mental and environmental challenges along the way.

"I like the projects, the main aim is to get to new passage" (Alf, Q1).

Reflective comment:

There is a canny similarity here with the ageing process in that these older cavers are not only physically venturing into unique and unknown environments, but conceptually they are also exploring the ageing process, territory which they have personally never experienced before! However, I also realise that although these older cavers can describe 'ageing' it can only in part prepare me for growing older. My specific sex, gender, life experiences and expectations will uniquely shape my own observations. As the poet John Keats in 1819 wrote to his brother and sister George and Georgina Keats, "Nothing ever becomes real till it is experienced".

One of the most significant challenges faced by the team was evident on the approach to the cave entrance and Alf was very proud and keen to show me their achievement on my arrival at the site for the first time. The cave entrance is located in a large shakehole, a depression in the ground found in limestone areas, "caused by the collapse of soil or glacial deposits (boulder clay) into a cave" (Haigh & Cordingley, 2017:235). In periods of wet weather, a stream can be found running into the entrance, whilst in periods of dry weather, a dry stream bed exists. I was informed that several caving clubs have previously attempted to dig in this cave, yet after a while these clubs have abandoned the dig due to the fact that after heavy rainfall, the stream would simply wash more sediment into the cave. This became very demoralising for the digging teams, finding that after all their hard work the cave had become filled with sediment again.

Figure 10 has been included in the main body of this discussion to illustrate the nature of the problem with the stream running into the cave entrance and how the building of the two dams has solved this problem.

The entrance to Black Moss Pot is in the bottom right hand corner of the photograph (Figure 10), just out of view. The two dams (as indicated below) were designed and constructed to filter the water going into the cave. I was informed of the importance of water still entering the cave, as this is useful to remove loose shale and sediment on the cave walls / roof, but crucially, by filtering the water, there is minimal sediment being carried back into the cave by the stream. This solution seems to be working well and the team are very proud of this achievement:

Digging provides “regular activity and challenges” (Ray, Q1)

We enjoy “solving cave related puzzles” (Peter, Q1)

Figure 10: Location of Dams at the Entrance to Black Moss Pot

Reflective comment:

There was an obvious sense of pride and accomplishment as Alf and his team of older cavers, with their vast experience and skills, have overcome a problem discovered by previous caving clubs by building two dams in the stream bed. This pride brings a sense of self-worth and meaning to a period of life which for many can be devoid of both.

5.2.2 *Mentally Stimulating*

The caves found in the Yorkshire Dales have formed in limestone rock over a period of many thousands of years. It is likely that Black Moss Pot was formed from glacial melt water, and is now filled with glacial sediment and debris. This notion is supported by cave explorers Gemmell and Myers (1952: 2) “when at last the glaciers melted away, clay and boulders were deposited at random on the flanks of the hills, obscuring cave entrances and filling or bridging over the pot-holes”.

As the act of digging in Black Moss Pot is taking participants into completely ‘new territory’, the cave diggers have (understandably) no idea which direction to dig (left / right / up or down) so there is considerable discussion and speculation at lunch times re the direction of the dig / any movement in the rock or shale beds / the course of the water and comparing the size of the rocks found in the dig face etc. *“The speculation of what lies beyond … helps keep me positive, glass three-quarters full” (Alf, Q1).*

This speculation appears to be a significant attraction of engagement in a ‘nature challenge’ (Stebbins, 2009) activity and according to Ray (Q1) it provides “false optimism” and “the hope of finding something new”. The group have also had to overcome challenges such as supporting and ‘shoring up’ the side walls to prevent a collapse and construct effective hauling systems to remove the sediment to the surface etc. These examples illustrate the continued high level cognitive functioning being employed by these older cavers engaging in this project, as Alf (I2) commented, *“it’s like pitting my wits against nature”.* As is the case in many outdoor adventure sports, the planning, preparation, equipment selection, choice of venue, consideration of the weather and possible escape routes etc. are all necessary and indeed vital to safe and rewarding participation.

Reflective comment:

At the dig face there was much debate about the best way forward, as the scoured rock wall on the left suggested it may be the direction to follow. Alf asked me to put my head in the place they had been digging most recently and to listen … "Can you hear it?" Alf asked me. I could hear the faint sound of falling water. There was glint in Alf's eye and a sense of excitement "Can you see why we think there is something big down here?" he said with a smile. I recognise that in a way my being an experienced and well-qualified caver meant that my recognition of Alf's hunch reflected and endorsed his sense of achievement and competence. A more subtle indicator of Alf's perceptions perhaps lay in the 'glint in his eye', that is an unspoken exchange of body language. Without my being able to use my own insider knowledge, this glint would probably have remained un-noticed. It was also a tacit and unspoken gesture whereby Alf was recognising my status as an equal.

At lunchtime the discussion revolved around the recent heavy rainfall and how the shake hole (approx. 30ft wide and over 20ft deep) had filled completely with water (the watermark with its remaining debris was still visible around the rim of the shake hole). Ray had visited the site on that day and witnessed the water then dropping dramatically, as if something had moved in the cave, similar to a plug being pulled from a bath tub, where did the water go? what route did the water take? … the mystery and speculation amongst the group continues …

In common with other risk-assumed adventure, the decisions reached through negotiation and collaboration indicates the high levels of autonomy and self-determination required to carry out such activities. In relation to the 'apocalyptic demography' described by Gee and Guttman (2000), criticising the portrayal of ageing as essentially negative and burdensome, this provides weight to their challenge. Additionally, it also questions the 'stigmatized knowledge' (Barkum, 2013) that continues to characterise much of the debate about ageing.

5.2.3 *Physically stimulating*

Maintaining physical fitness and the opportunity to overcome challenges were identified by many of the older cavers as one of the benefits of cave digging, it is *"very strenuous"* claimed Doug, (I2), providing *"regular activity and challenges"* (Ray, I2). The cave diggers haul approximately 100 bags of debris / sediment a day (weighing approximately 5kg each) to the surface. This involves the cave diggers climbing up and down caving ladders (approximately 25m of vertical depth) several times a day, and hauling these 5kg bags through awkward tight passages using make-shift trays from plastic containers (see Figure 11) as well as hoisting bags up the vertical pitches to the cave entrance.

Figure 11: Hauling Sediment to the Surface

Value of including Figure 11: This photograph illustrates the rudimentary methods used by the older cavers to haul debris / sediment to the surface by using make shift trays from plastic containers and rope. The passage in this photograph is relatively straight forward to pull trays along, being approx. 1m wide with a reasonably smooth surface underneath. From my visits to the site, I can confirm that there are other passages in this cave which are less than 0.5m wide, with uneven rocks and boulders underneath which makes progress slower and the work far more physical. This physicality was probably very important to the diggers from their exclusively male perspective whereby competency and social worth is partly embedded in the capacity for work and physical exertion. It is probably seen at its most extreme in studies of bodybuilders (Fussell, 1992).

Once at the surface, rather than just emptying the sediment on the ground in close proximity to the cave entrance, the cave diggers lift the local turf, empty the sediment on the ground, and then replace the turf so that it eventually it re-establishes itself (as illustrated in Figure 12: 90).

Figure 12: Disposing of Sediment at the Cave Entrance

Value of including Figure 12: This photograph illustrates the efforts made by the cavers in disposing of sediment and minimising environmental damage at the cave entrance by lifting the turf. Once emptied, each bag is washed in the stream before it's taken back into the cave, to avoid any excess sediment returning to the cave. The photograph also clearly shows where the turf has already started to re-establish itself (at point X).

This clearly illustrates the connectedness, environmental awareness and responsibility of the cave diggers, as this prevents the unsightly mound of mud and sediment at the cave entrance which might attract disapproval from local farmers and other recreationalists / land-users. Additionally, and from an intensely pragmatic engineering perspective, again emphasising cognitive engagement, this prevents sediment being washed back into the cave again.

The findings also show a recognition and acknowledgement by these older cavers of the need to keep fit and healthy as they age, "ca*ving helps to keep me*

fit, which we all need …as we get old and rusty" (Doug, I2). A plan is agreed at start of the day, everyone is assigned a task / role by Alf (the co-ordinator / leader) and a target is set of the number of bags to be brought to the surface before lunch. At lunchtime, progress is reassessed, goals refined and tasks agreed and allocated for afternoon. There is a high level of task inter-dependence and focus on getting the job done and a high emphasis at this stage on negotiation of priorities.

The attraction of the self-selecting, self-paced nature of outdoor adventure sports is illustrated here and is enabling the older cavers to cope with age related adversity through the maintenance of technical knowledge, an awareness of, through and in their physical capacity, and cognitive and social engagement. This supports the notion that "when older people engage in meaningful leisure pursuits of their own choosing, the potential exists for personal empowerment and resistance to the negative discourse of aging" (Dionigi & Horton, 2012:33)

Reflective comment:

As a caver and an insider researcher, I respect, admire and can fully appreciate the remarkable progress these older cavers have made in Black Moss Pot and the many obstacles and challenges they have overcome since they started this project. It must be remembered that many of these challenges remain intensely physical irrespective of age. After each visit I made to the site, where I would help the cavers with the dig for the day, my body would take several weeks to recover due to the physical nature of the work involved. I wonder how these older cavers manage to keep this up week after week and hope I am also able to do so in years to come! As observed above, this physicality might be rooted in the male psyche and remain part of the image that these older males like to cultivate. Whilst I am realistic enough to confess to my post-exercise fatigue, it is unlikely that the diggers would have done so!

5.2.4 *Career Path (Utilising Skills and Experience)*

Cave digging is highly skill dependent, and both physically and mentally challenging. Many of the older cavers in this case study have an engineering background, and a desire to continue using these skills as they get older in this cave digging project. They also all have cave digging experience, and this prior knowledge and experience has proven to be extremely valuable. The dig has involved using explosives to remove blockages, fixing scaffolding, timber and concrete to support and shore up side walls, installing bolts for anchors at the pitch head, designing effective hauling systems to transport sediment to the surface with minimal effort, as well as designing a method for diverting water away from the dig face. Ray (Q1) explained that he brought a *"logical mind"* to the project and enjoyed these *"civil engineering challenges",* which also illustrates the cognitive functioning required for this project in order to solve problems and to overcome the various challenges. Additionally, it undermines the skills fading that can be associated with withdrawal from the work force, and which for some emphasise feelings of disempowerment and loss of social utility (Alfermann, 2007).

Alf, who co-ordinated operations at the dig, was a shop supervisor when in employment, and appeared very familiar and comfortable in his role co-ordinating the digging operations, delegating roles / tasks to the team, time keeping and goal setting, such as calculating how many bags must to be brought to the surface before a break.

Peter also revealed in phase 1 (the questionnaire), the skills and experience that he brings to the project:

"I bring my in-the-background managerial leadership technique of guiding and making suggestions… I am reasonably handy at DIY so am able to contribute to work aspects, e.g. scaffolding, shoring up and I am reasonably good at problem solving" (Peter, Q1).

Reflective comments:

On arrival at the dig, Alf gave instructions to the team, Ray and Peter would go straight underground to the dig face, whilst Doug, Alf and I would start by lifting turf on the surface. The aim was to bring 50 bags out before lunch. When down climbing the pitch I noticed a tarp had been installed to stop the water splashing out on the diggers as it tumbles down the pitch. Alf informed me that they had used a curtain on other digs, and it worked well, diverting water away. Previous cave digging experience as well as skills / knowledge from employed roles were clearly being used and benefitting the project, also enhancing feelings of achievement and self-worth. Additionally, this reinforces the work of Wenger, McDermott and Snyder (2002) where a community of expertise must develop and store tools, which can include knowledge, techniques and skills; and where shared endeavour characterises the stability of the group.

By utilising their skills and experience, these older cavers are filling the 'void' that can result following retirement from work or reduction in role / responsibilities (Mayocchi & Hanrahan, 2007). This also helps to maintain a sense of self-worth and image – a perception of 'usefulness', that they are making a contribution and connectedness with the wider caving community.

Reflective comment:

Alf was keen to show me the exact location in Black Moss Pot where he had drilled two shot holes, and by using explosives, had removed a section of rock to enable easier access to the pitch head and the route on. The two shot holes were drilled diagonally into the rock and needed to cross at exactly the right point for a clean extraction of the rock and importantly to prevent it falling down the pitch head, creating more work for the team in having to remove it. This was not an easy task, and rightly so, Alf was extremely proud of this. It also reflects the level of skill that can be invested in Serious Leisure. The planning, execution and exploitation of the use of explosives is complex and challenging and no doubt brought Alf a sense of competency that could be 'traded' as a form of capital.

This supports the notion that serious leisure participants are "inclined to experience feelings such as accomplishment, self-actualization, self-enrichment, and physical health" (Lee & Payne, 2015:3).

5.2.5 *Unique Ethos and Identification*

The findings from this case study revealed that many of the participants had experienced successful digs before, *"exploring new caves is wonderful" (Doug, Q1).* These older cavers share a common drive for another successful break through and feeling of accomplishment, motivated by *"the hope of finding something new"* (Ray, Q1), and the shared goal of *"being somewhere no-one has ever been"* (Peter, Q1).

The findings illustrate that these older cavers have a tremendous sense of pride and a desire to give something back to the caving community as Alf (I2) remarked that cave digging is "v*ery important to our knowledge and gives the caving community more passage to explore".*

Reflective comment:

I have huge admiration for this team of 'older' cave explorers, all of whom have significant medical problems / illnesses. Yet despite these, it seems to make them all the more determined to 'get the job done'! Recognising that their time is limited, they are driven by the desire to give something back to the 'caving community' by finding new cave passage, keeping a diary / log of progress and organising the caving club library / records etc. for future caver explorers to refer to. Thus, a contribution to both their own and the wider caving community of practice was evident here. A legacy of widely shared information was important and undoubtedly shored up the collective sense of identity and worth. At meetings with other cavers, this knowledge would be useful when reflected (and thus reinforced) by peers.

The findings indicate an apparent drive to develop and produce a knowledge base that the group own and value, and attracts credit. Group members share in the production of this knowledge, in its dissemination to the caving community, and the on-going respect that this affords them. As such, this both buttresses and reflects the maintenance of social and cultural capital in their wider social grouping (Savage, 2015). In contrast, many older adults, from a male perspective, become redundant as their physical prime, and thus their value and self-worth is passed.

Research suggests that serious leisure can provide an effective substitute for work, providing a sense of identity and belonging (Heley & Jones, 2013), and as Peter (Q1) confirms, *"it feels good to be involved".* Engagement in leisure

activities can result in psychological benefits such as a feeling of self-worth and a sense of belonging, concepts reflected back by the social groups to which they belong (Savage, 2015). This feeling of self-worth is important as according to Twigg (2004), living in a youth-obsessed culture can lead older adults to see signs of ageing as evidence of personal failure. Derogatory jokes about ageing are commonly found in greeting cards, mocking physiological losses and concealment of the ageing process. Making efforts to conceal signs of ageing through cosmetic surgery, clothing and cosmetics adds support to the notion of a 'masquerade' (Biggs, 2004), suggesting that ageing is devalued and something to be ashamed of (Dionigi & Horton, 2012). Whilst in action films such as 'Terminator', Arnold Schwarzenegger is perceived as an icon of muscular masculinity (Boyle, 2009), for the older cavers, it could be argued that they are equating a sense of self-worth with their digging progress, their fitness and continued physical capacity. The older cavers recognise the value of their digging efforts to extend their knowledge of cave systems and also to that of the wider caving community. The findings suggest that these older cavers recognise the limited time they have left and share the desire to get the job done, to make a contribution to the wider caving community, illustrating a sense of legacy.

Leisure can provide opportunities for reaffirming self and developing a new identity (McGuire, Boyd & Tedrick, 2009) even in the later stages of life. Furthermore, integral to the concept of legacy is the sense-making that humans try to impose on the lived life (Weick, 1995). Part of this process involves the social re-negotiation and 're-alignment' of experiences to fit acceptable and psychologically comforting narratives of the life-story. For the older males in this study, remaining connected to caving affords the opportunity to impose value and meaning on the current experience of life and also to overlay this retrospectively,

to be at peace with lives of meaning (Leary & Kowalski, 1990; Leary, 1996; Goodson & Sikes, 2001; Goodson, 2012).

5.2.6 *Social Interaction, Belongingness and Self-Enrichment*

The findings indicate that the social interaction and camaraderie that exists between these older cavers is one of most important aspects of engagement. The banter, mockery and 'dark humour' helps to enhance and develop their friendship, trust and support for each other. Alf's comment therefore is particularly poignant *"we knew each other vaguely, … this has brought us closer together and we got to know one another" (Alf, Q1).*

Interestingly, the older cavers in this case study are members of different caving clubs and they have come together in order to join forces, recognising the value of the shared drive, knowledge, skills and experience in the team in order to succeed. There is a sense of belongingness and kinship with others, as Ray (Q1) commented on the digging project, that there is *"a common interest to speculate about".* This is also supported by Alf's (I2) comments: *"we get on well together" and "part of it is … the planning, the camaraderie with people in a like mind on a project".* Peter, (Q1) also commented that its *"nice to meet the digging friends" and "it feels good to be involved".* This supports Boyes (2013) claim that participants spending time together solving problems in outdoor adventure sports actually intensifies social processes. The social production of knowledge also brings the group closer through shared efforts to produce that knowledge. Additionally, the group also determines the sense-making to be allocated to that knowledge set. Again, this production of knowledge contrasts with the perception

that older people may be thought of as the *repositories* of knowledge but are past their stage as the *producers* of knowledge.

> ***Reflective comment:***
>
> *The day I accompanied Alf and his team to Black Moss Pot, I saw for myself the importance of teamwork in this digging project. Not only in providing the physical 'man-power' required to haul bags of spoil, digging, carrying, cleaning etc. but also in the interaction within the group, such as problem solving, discussing what support is required to stabilize the roof and sidewalls, sharing ideas and overcoming obstacles by using the experience, knowledge and skills within the group. Alf (I2) reaffirmed my observation of the importance of 'team work' by his comment "you can be a lone caver, but you can't be a lone digger"! Thus, the notion of relationships and community seemed central to this comment.*

Research suggests that the higher the social component of serious leisure, the more likely serious engagement will occur and be maintained (Lee & Payne, 2015). Additionally, for these cavers, at least, these activities offset two of the potentially most insidious and destructive elements of ageing, social isolation and loneliness (Bowling, 2005; Victor, Scambler & Bond, 2009).

Peter (Q1) provides support for this claim, acknowledging that *"it helps keep me active, the regular digging trips being especially important because a) they are regular and b) there is (implied) peer group pressure to attend wherever possible".* This also supports the notion that participating in a 'nature challenge' activity (Stebbins, 2009) within a 'serious leisure' framework enables sustainability of effort and commitment to that activity, as the motivation to partake in the activity, with like-minded people maintains this engagement. There

is an apparent sense of mutual responsibility to the group AND possibly the influence of FOMO the 'fear of missing out' (Carson, 2017).

Reflective comment:

One of the most important parts of the digging project is the camaraderie and social interaction within the group. Alf informed me that "the banter, mickey-taking, friendship, team spirit, support, trust and co-operation with team mates is key". I now wonder whether the banter, which often focused on physical shortcomings, helped create a shared space where ageing could be understood through humour. It also forms a key component of the socio-linguistics of the caving community.

5.3 Managing Health Related Adversity

As described previously in the Literature Review, there is inevitably, a degree of degeneration of the human body that accompanies the ageing process. However, research suggests that this degeneration can be slowed down (Chodzko-Zajko, 2013; Norman 2010: Livingston et al, 2017). The findings of this research suggest that through physical, mental and social stimulation, caving can be instrumental in this. This case study of older cavers engaged in a 'serious leisure' project, supports the notion that maintaining physical activity, social connectedness, environmental engagement and psychological involvement, has health benefits for individuals and society (Alves & Sugiyama, 2006; Peace, Holland & Kelleher, 2006). Successful ageing has been described as a **'multidimensional** concept' (Fernandez-Ballesteros et al, 2008, 2010), as it is "influenced not by one type of stimulation, but by diverse factors such as physical, cognitive, or social stimulation" (Lee & Payne, 2015:13).

So what do outdoor adventure sports offer that other more traditional sports do not?

Outdoor adventure sports, such as caving, are self-selecting, self-paced, involve goal setting and high levels of social interaction. The findings of this study support the multi-dimensional notion that adventure sports are mentally and physically challenging, enable social interaction and engagement with the natural environment (Boyes, 2013). This case study supports the notion that these components are actually intensified in outdoor adventure activities due to the challenging environments, problem solving, increased risk and tight social bonds that exist between participants in this activity.

Furthermore, the findings also show that project-based serious leisure has become a useful distraction and a way for these older male adults to manage their age and health related issues, as Alf (I2) confirmed: *"going caving keeps me fit and is a distraction"* and *"if you're sat at home, you will think of all the things that are wrong with you won't you, if you're not doing anything"* (Alf, I2). Doug (I2) also commented that caving helps *"you take your mind off it, I'm very rusty".*

Research suggests that **resilience** is an essential element of successful ageing, particularly in the face of adversity and the challenges of late adulthood (Hildon et al, 2009). Belonging to a community with strong social ties underpins the benefits of adventure for older people and enables inter-personal coping networks to be developed (Boyes, 2013). In support of Boyes' claims, our findings suggest that it is these tight social bonds that exist between adventure sports participants (in the form of 'serious leisure') that are the very mechanisms that support the networks that enhance resilience and support wellbeing in older adults. The cave environment is familiar and non-threatening to this group of older

cavers: it is a place where they feel safe and comfortable to talk to one other about any health or age related concerns.

When asked to comment on the ways in which caving helps to deal with what were perceived as age or health related issues, Peter (Q1) explained that

> *"It helps me to forget that I'm 68, at least until I try to do something that was 'easy' ten or twenty years ago but is no longer. Being able to carry on caving shows that the age or health related problems I may be 'suffering' are not, indeed cannot, be that serious, at least in physical terms".*

This adds support to the notion that outdoor adventure activities provide an 'alternative value' (Holowchak & Reid, 2011; Hickman et al, 2015; Hickman, Inkster & Rosser, 2017), i.e. it means so much more to the participants than just caving. Nimrod (2011) suggests that during the ageing process, leisure becomes less of a goal and more of a 'means', with a range of motives, including keeping healthy and maintaining cognitive abilities (Kolt, 2002).

According to Nimrod and Janke (2012) there are three key sources which provide meaning in life, and these are career, family and leisure activities. It is acknowledged that at certain points across the life course, leisure will be secondary to career and family, yet following retirement, and at a time when children leave home, leisure may become more important and have more meaning to one's life. This change of meaning implies that leisure has a distinctive role in the lives of older adults, and as our findings illustrate, can also be described as a 'resource for resilience' (Nimrod, 2011). With outdoor and adventure activities and sports commonly associated with adolescence and young adulthood, the findings from this study suggest that re-casting these activities could afford social benefits. The situation is perhaps, comparable to the

historical state of female participation in sport and exercise (Skillen, 2013; Williams, 2014) where challenging the status quo has been necessary to both increase participation and enhance the experience. With an ageing population set to characterise society for the foreseeable future the findings from this work suggest wider potential.

As discussed previously, leisure may be regarded as a replacement for work, and can help to fill the 'void' created following retirement from work and the loss or reduction of roles and responsibilities. This project has enabled these older adults to transfer and maintain their skills, which in turn provides a continued sense of self-worth and identity. Remaining active, skilled and knowledgeable post retirement from the labour force enables the reinvention or reinforcement of one's identity and enhances a sense of purpose and belonging to a community.

Reflective comment:

Recognising that they have limited time, Alf and his team keep a record of the cave digging projects completed and work on-going, so that this is documented and useful for future generations who will continue where they left off. There is a sense of legacy and self-worth, but also a strong sense of belonging to a community of cavers, and 'giving something back' to caving. What was given was reflected by peers and reinforced the diggers' status. I feel an affinity here in that I am now more confident when interacting with groups of researchers who reflect my (new found) skills and knowledge through subtle affirmative body language and positive comments.

Engagement in leisure activities can help older adults to cope with their health related adversity through psychological benefits such as a feeling of worth and a sense of belonging. As illustrated, leisure can also provide opportunities for

reaffirming self and developing or maintaining an identity (Hockey & James, 2003; McGuire, Boyd & Tedrick, 2009) especially in the later stages of life when other social and cultural markers, such as work and parenting no longer characterise daily existence.

Some older adults avoid physical activities for fear of aggravating an existing injury / ailment or for fear of getting hurt (O'Brien Cousins, 2000), whereas others are seeking the satisfaction and reward from the feeling of self-worth and providing meaning in their lives. Participation may also be driven by the desire to re-energise a part of their life that has become inactive or perhaps even to develop a new identity. Why is this important in practise? For outdoor professional, practitioners, and providers of outdoor adventure sports, an understanding of the motives for engagement in leisure activities by older adults is imperative in order to meet expectations and requirements. As the findings of this case study show, the emphasis is placed on the importance of personal value and meaning, and supports the notion that it is the experience that is important rather than the outcome, such as fitness, (Kollard, 2007).

In response to our increasingly older population, recreation and leisure activity providers need to be flexible and "must consider cultural and cohort differences and divergent perceptions of aging and leisure" (Gibson & Singleton, 2012: pviii).

In an attempt to obtain critical feedback, the findings of this research project have been shared with critical friends and through presentations at a number of conferences (aimed at academics, researchers, practitioners, cavers and gerontologists), as part of the dissemination strategy. A reflection of the feedback received from the most recent conference attended is provided below:

5.4 Reflective Consideration of Critical Feedback (received from the Adventure Sports Coaching Conference, 12th January 2018, Plas y Brenin).

On 11th - 12th January 2018, Plas y Brenin, the National Mountain Sports Centre in Snowdonia, North Wales, hosted an inaugural Adventure Sports Coaching Conference to explore the role of coach developers in adventure sports performance. The aim of the conference was to bring together academics, researchers, coach educators and coaches from a range of universities, National Governing Bodies (NGBs) of sport and related organisations with an interest in this currently under-researched field.

I was fortunate to be given the opportunity to present the findings of my research at this conference, which enabled me to obtain valuable critical feedback from both academics and practitioners within the field of Adventure Sports Coaching.

Figure 13: Opening slide for The Adventure Sports Coaching Conference Presentation, Plas y Brenin, 12th January 2018 (See Appendix 14: 150 for full slide presentation).

It was the intention that the presentation *"Understanding Successful Ageing through Nature Challenge Activities"* would provide insights from older adult climbers, cavers and sea kayakers aged 55+. However, due to unforeseen circumstances, Mark Hickman and Alli Inkster were unable to attend the conference, so it was agreed that for this presentation, I would focus on the area of my research in greater depth, illustrating how by engaging in an 'nature challenge activity', (i.e. caving) is helping a group of older adults to cope with ageing process.

Throughout the conference, presentations were provided by academics and researchers representing eight universities, all of whom broadly provide undergraduate and / or post graduate study in outdoor adventure sports coaching (including Bangor University, Cumbria University, Leeds Becket University, Liverpool John Moores University, University of Chichester, University of Derby, De Montford University and UCLan), as well as National Governing Body (NGB) representatives from the Mountain Training UK (MTUK), Mountain Training Association (MTA), British Canoeing (BC), Union of International Mountain Leader Association (UIMLA), and Association of Mountaineering Instructors (AMI). An opportunity to present the findings of my research to academics, researchers, practitioners and NGB representatives at the conclusion of my research project was too good an opportunity to miss!

The question and answer session and discussion which followed my presentation and the critical feedback personally received proved to be invaluable in developing new perspectives, and reflect the evolution of learning on my post graduate journey. Crucially, this feedback also demonstrates the potential impact of my research on practice in the 'real world', as the two following examples will illustrate:

Firstly, John Cousins (Mountain Training UK), was very interested in my research and approached me regarding possible ways of sharing my work of older adults and outdoor adventure sports with the Mountain Training Association membership, via workshops / webinars etc. From a pragmatic perspective, enhancing awareness and understanding of the motives for engagement in outdoor adventure sports by older adults will enable a more effective provision.

Another example of the possible application of this research to the 'real world' is illustrated by a conversation with Jackie Bryson (Chief Executive of Mountain Training Trust / Plas y Brenin) who approached me regarding the possibility of a joint project with Plas y Brenin who are currently working closely with the Ramblers Association, providing training for their volunteer leaders (many of whom are 'older adults'). We discussed the possibility of a research project, which could contribute to the research on older adults and adventure sports and provide evidence / support for funding at Sport England level, exploring the value of volunteering and participation in outdoor adventure sports by older adults through leading others on walks. These two examples illustrate the value of exposing data to critical reviews through the dissemination strategy and crucially it indicates the possible application and value of this research in the 'real world'.

On reflection, of significant importance in developing my knowledge, it is also worth noting a discussion that took place following my presentation involving academics, practitioners and myself. In this example, one practitioner related the findings from my case study to another group of older adults in the South East who meet regularly and share a common interest in steam engines. An interesting discussion followed on what makes outdoor adventure sports so unique? This was invaluable in reaffirming the findings of my case study and enhancing my beliefs on the specific benefits of outdoor adventure sports in helping older adults

cope with the ageing process. This example also demonstrates how knowledge evolves each time it is disseminated and when critical feedback is received either in theory or practice.

Since my presentation conveniently coincided with the write up of my discussion and at the conclusion to my research project, I have included this reflective consideration of the feedback to exemplify how my thinking has evolved. This illustrates the fluidity of knowledge as described in the Methodology (see Appendix 6:131, for a conceptual diagram of ontological and epistemological considerations).

5.5 A Pragmatic Approach

As my research has shown, a pragmatic approach (Giacobbi et al, 2005; Feilzer, 2010) has driven an application for my work to have value in the 'real world' as well as theoretically. This approach is appropriate for data collection in challenging and dynamic outdoor environments and is subject to analytic generalization (Yin, 2014).

Although from the outset, there was an acknowledgement that there will be no statistical generalization of these findings, there is however an analytic generalization about the *process* from which I have gathered my data. In other words, another practitioner could engage with my research and the methods employed, and decide whether this could be transferred to another particular context. Additionally, Bassey (1999) suggests a 'fuzzy' generalization, employing more fluid, rather than fixed terms. In this way, others might infer the findings of this project as useful in similar contexts. This is illustrated by the responses outlined in brief above.

Although my findings are innovative, providing a valuable insight into how older adults are using caving to cope with the ageing process (Aim 2), of equal importance is my relationship with and to the research process (Aim 1), that I have had to design, engineer and run, and in some cases discount, due to the pragmatic nature of field based research.

5.6 Conclusion

This chapter has provided an interpretation of the findings obtained and how this relates to the aims identified at the beginning of this research project or to other research carried out in this area.

CHAPTER SIX – Conclusion

6.0 Introduction

The purpose of this chapter is to evaluate the research project, starting with a brief recap of the reasons for undertaking the research, followed by a critical evaluation of whether the aims of the study have or have not been met. Secondly, there will be a reflective description of what I have learnt from the project, as well as what the participants (older cavers) have gained from the process and the key findings. This chapter will also consider the research process undertaken and how the skills I have learnt may be applied in my work at UCLan and supporting students in their research projects in the future. Finally, this chapter will examine how this research project may be extended with a useful guide to researchers investigating this subject area in the future.

6.1 Aims

This research project evolved through my interest and enthusiasm for caving which began over 30 years ago. Throughout my personal and professional caving experience, I became aware of, and hugely inspired by the older cavers (over 65's) I have met who are still actively caving and at the 'cutting edge' of cave exploration despite their age and health related adversities. Their continued enthusiasm and drive to find new cave passage encouraged me to design this research project to investigate the role that caving plays for the older adult. Given the potential scale and scope of this research project, the aims were formulated and capped at three, to allow for sufficient depth and focus. These aims have been constantly revisited throughout the project, in the same way that a mountaineer would revisit a 'handrail' as a guide when navigating a route to

confirm his / her position and the direction of travel. It is now time to evaluate the extent at which these aims in turn have been met:

Aim 1: Develop my skills as a researcher and my knowledge of the research process in order to support students that I interact with more effectively.

It was over 20 years ago that I was last involved in any academic research, and re-familiarising myself with the research process has been challenging yet extremely enlightening and rewarding. I recall previously spending many hours in the library for my undergraduate research project, looking through microfilm, books and journals as the internet was not fully established or widely available as a resource. The ability to access such a wide range of literature and resources remotely now 20 years on, has been hugely rewarding and 'opened my eyes' to the range of digital resources now available. It was a big relief to discover that I would not need to spend hours in the University library, yet could do a lot of the research in my own home at a time to suit me and my availability. The easy access to literature, resources, and regular Skype tutorials with my supervisor has enabled me to carry out this research project remotely, thereby managing some of the challenges and costs previously identified, such as time management and ensuring a work/life balance and supporting a young family.

I can now fully appreciate the significance of being an 'insider' researcher and being accepted as a member of the group in order to obtain data (that might be considered sensitive information) by this 'hard to reach' group. My knowledge, experience and competence within caving allowed me to be accepted into the all-male group in order to investigate and collect data 'in the field' – as a keen caver, this was one of the attractions for this study. However, given the very dynamic nature of the underground environment, collecting data presented many

challenges and this has certainly resulted in the need to be adaptable and flexible, thereby enhancing my skills as a researcher. I experimented with recording data via traditional methods such as using pen and paper, voice recorder, and even a 'Go-Pro', all of which presented challenges in this environment. The lessons learnt from my data collecting methods are provided in a useful guide for researchers at the end of this chapter, in order to assist future studies of this nature. I also became aware of the tensions that can exist between insider-outsider research roles and perhaps this was the driver behind my taking cakes to one dig (See Reflective Comment: 82). Ostensibly, I thought this an offering or contribution to the group but perhaps it was a sign of an inner turmoil that I was using a very privileged insider status to act as an (outsider) researcher, and irrespective of how overt I had made this to the group this remained taught within me.

I believe that I now have a more informed understanding of the research process so that I can confidently support and assist undergraduate students at UCLan who are undertaking research, particularly within outdoor adventure sports. In particular, I feel I have learnt the following from undertaking this research project:

- The conceptualisation and design of a literature review. An awareness of the different types of literature, and contemporary ease of access. Additionally, establishing and maintaining an annotated bibliography allowed for easy cross referencing of sources; I also learned the value of creating an initial concept diagram to inform the literature and then organising this into a linear flow. This also required me to learn the skill of critical selection and de-selection and its role throughout the extended project.

- Getting to grips with ontology and epistemology was daunting at first but has allowed me to appreciate the philosophy of knowledge albeit at an elementary level. Having a clear but flexible plan allowed me to cope with the problems of data collection. Whilst I consulted research methods texts for advice, nothing could quite prepare me for the vicissitudes of gathering field-based data. The confidence to improvise-adapt-overcome was important here furnishing me with a clearer vision of the relationship between theory and practice. In particular, I now appreciate the value of gathering data at a location where the participants feel comfortable, but that this can give rise to tensions if it eats into their valuable 'activity' time and they understandably feel the draw of their activity.
- As a novice researcher, adopting manual data analysis was challenging. There is an apparent tension within research literature regarding the relative values of manual and computer assisted data analysis but as a novice researcher, with an admittedly small sample, manual data analysis was the preferred method. In this instance, I believe that my insider status, and use of a critical friend, paid dividends. Project planning here allowed for the nature of the Discussion to evolve quite freely, with each (higher order) theme being informed by sub-components.
- Once again, imposing limits on the Discussion, and not being overly ambitious with the range of themes that I wanted to review, were useful learning points, as well as linking all of these points together with constant attention paid to how each chapter would articulate my aims. Having this 'handrail' allowed for more critical focus and the build-up of a reservoir of information that could be used to extend the project – see below.

- Endorsing the work of Wenger, McDermott and Snyder (2002), my project has not only allowed me to better understand the world of caving, it has also afforded me a clearer picture of the process of research and the problems faced by being a researcher: it has resulted in a better appreciation of the communities of researchers that exist at UCLan, particularly novice undergraduates who I might now be able to help identify their own 'handrails' to their respective goals.

Aim 2: Make a contribution to theory through establishing a platform to understand ways that older adults conceptualise mining.

I believe that this study has made a contribution to theory, by expanding the limited body of knowledge that exists regarding ageing and outdoor adventure sports, and in particular, caving, an area that is rarely explored. More broadly, it makes a contribution to the wider attempts to understand the relationship between active ageing and how this impacts positively on well-being, fitness and health (Grant & Kluge, 2012). I believe this study contributes to the growing evidence of older adults enhancing well-being and maintenance of skills through the physical and cognitive activity found in outdoor contexts (Brennan, 2008; Nimrod, 2011; Sugerman, 2007). As part of my dissemination strategy, I have presented the findings of my study at a range of academic and professional conferences, and the positive feedback received has reaffirmed my belief in the value of this study in terms of making a contribution to theory and practise. I feel immensely proud that my research has been considered of value and worth in the fields of health, gerontology and sport coaching and thereby contributing to a wider body of knowledge across many disciplines. I acknowledge that the impact

is limited but also that I can capitalise on some of the opportunities that have been described to me at conferences and possibly extend the study.

Aim 3: Make a contribution to practice knowledge through understanding ways in which this impacts on vocational employment.

As part of my dissemination strategy, in addition to academic conferences, I have also presented the findings of my study at a number of conferences for cavers, outdoor professionals, and adventure sport coaches. This opportunity to share my findings within the industry was daunting at first, but the positive feedback received from Mountain Training, Plas y Brenin National Mountain Centre and other outdoor professional bodies gave me huge confidence in the value of this work. The recognition of the value of this study by a National Governing Body (NGB) was extremely rewarding and demonstrates the significance of my findings not just within the practice of caving but more widely within outdoor adventure sports. NGB qualifications in adventure sports require coaches and leaders to have a working knowledge of the anatomical and cognitive stages of children's' development, but there is no reference to older adults in the NGB guidance notes / syllabi for coaches and leaders (yet!). With an ageing population predicted to impact on society for the next 20-30 years it is appropriate to consider the needs of this group, and it is rewarding to think that my small case study may contribute towards this. Following my presentation at the Adventure Sports Coaching Conference (Jan 2018), I was thrilled that Mountain Training approached me with regard to providing further training / resources on working with older adults to update their coaches and leaders. It is gratifying to know that the value of my study has been recognised by the NGB for Mountain Training, which may result in other NGB's within outdoor adventure industry following suit.

6.2 Reflecting on Learning

6.2.1 What Have I Learned from this Research Project?

On reflection, I feel I have learned a huge amount about the research process by undertaking this post graduate study, following a break from academic study of approximately 25 years. A detailed account of what I have learned regarding developing my skills as a researcher and my knowledge of the research process, as well as my contribution to theory and practise is described in my evaluation of the Aims 6.1 (109-114). In addition to this, it is important to note that prior to enrolling on the programme, I spent over 12 months exploring ideas and planning this project with my supervisor. I was apprehensive, firstly that I had the knowledge and skills required to complete a post graduate study, and secondly, that the subject matter 'had the legs' required for a research project at this level. I can now appreciate that this time spent in reconnaissance was certainly not wasted, as it enabled me to explore various ideas (like trying on shoes!) before deciding on the direction of the study.

With the guidance and support of my supervisor, my confidence in the research process and knowledge of the subject matter developed progressively over time. Presenting at a range of conferences (for academics, outdoor professionals, adventure sport coaches and cavers) and obtaining critical feedback at different stages throughout the research project, helped to reassure me of the value of this work in theory and practice, enhancing my self-confidence further. I am very aware that developing such confidence is time-sensitive and, at least for me, could not be rushed. Also, I am aware that I was carefully encouraged to take my research beyond my normal comfort zone but that this was designed to give me the confidence that I (did not know I) needed. Again, this will be useful to underpin

any subsequent study and also to design strategies to enhance the confidence of other researchers.

This study has not only contributed to my practice knowledge with regard to its impact on vocational employment and NGB awards within outdoor adventure sports, but it has also enhanced my personal understanding of the practice of caving and the role of the sport of caving for the older caver. As a caver myself, who will, before too long, also be regarded as an ‘older adult’, I have been hugely inspired by the enthusiasm and motivation demonstrated by the older cavers in this case study. Each time I visited the group at the cave site, I was enthused by the excitement, optimism and ‘glint in their eyes’ of the possible ‘break through’ into new territory. This project has clearly encapsulated these older cavers and is providing a useful distraction from their various illnesses and ailments. By exploring the theory which underpins ‘successful ageing’, and from my time spent with this group of older cavers (over the past 3 years), I now feel that I have a more enhanced and informed understanding of how sport, and in particular caving, can provide a vehicle to ameliorate and cope with the ageing process, specifically in managing health and age related adversity.

The project management and research skills I have learnt and developed since embarking on this project over two years ago will be useful if I decide to progress onto a PhD study, but are also transferable to my existing role at UCLan and will help me in supporting students in their undergraduate research projects. I feel confident that this does not need to be confined simply to the research process in isolation but, through several decades in the workplace, can also be placed in the context of how research skills contribute to employability. This might help some, undergraduates in particular, to overcome stereotypical views that the research process has a value only in itself. As examples, I can now clearly

articulate how my project required negotiation skills, used initiative to explore alternative ideas, explanations and solutions, and adapted communication skills for different types of audiences.

6.2.2 What Did the Cavers Gain from this Research Project?

The older cavers in this case study are immensely proud of their achievements at Black Moss Pot. They welcomed the opportunity to talk to me about their digging project, and what caving means to them at this stage in their lives. They recognise that their time is limited, and there is a strong desire to “get the job done”. The cavers were keen for me to visit, take pictures and write about their project in caving newsletters and other publications. Each time I visited the site, I received a warm welcome and was regarded as a member of the team, as crucially to the team, I provided another useful pair of hands to help remove soil from the dig face (and cake to enjoy at lunchtime!). I recognise that it was probably the latter physical contribution that provided the greatest utility to the group. Whilst I have communicated my findings to the diggers, they remained somewhat distant to the abstractions being woven around their essentially practical and applied activity. Their talking to me, and expression of thoughts, allowed me to analyse and interpret (with their input) but it did not remove any rubble! The photographs and commentaries that appeared in caving literature were probably extrinsic rewards for their efforts underground and it must be remembered that academic conferences were most likely not the physical or conceptual terrain they were most likely interested in: their legacy was clearly orientated towards the caving community in which they felt most at home and which contributed significantly to their senses of identity and self-worth.

6.3 Key Discoveries of this Research Project:

- Outdoor adventure sports, such as caving, are self-selecting, self-paced, involve goal setting and high levels of social interaction.

- The findings of this study support the multi-dimensional notion that adventure sports are mentally and physically challenging, enable social interaction and engagement with the natural environment (Boyes, 2013). The findings suggest that in outdoor adventure activities these components are intensified due to the challenging environments, problem solving, increased risk and tight social bonds that exist between participants.

- This ‘serious leisure’ activity enables older adults to transfer and maintain their skills, which in turn provides a continued sense of self-worth and identity. The findings support the notion that remaining active, skilled and knowledgeable post retirement from the labour force enables the reinvention or reinforcement of one’s identity and enhances a sense of purpose and belonging to a community.

- In support of Boyes (2013), the findings suggest that it is the tight social bonds that exist between adventure sports participants (in the form of ‘serious leisure’) that are the very mechanisms that support the coping networks that enhance resilience and support wellbeing in older adults.

- In this case study, project-based ‘serious leisure’ has become a useful distraction and a way for older male adults to manage their age and health related adversity.

- These discoveries should not be interpreted as new knowledge on a global scale but instead as new knowledge that was unique to me.

6.4 Extending the Project

As a novice researcher I have learnt to limit my aims, not to be too ambitious in my goals at the onset, and be mindful of the scale, scope and time available for a study at this level. The thinking described below is congruent with using pre-existing data and optimising its value before attempting to expand analyses in different directions.

To extend this project further, I would re-analyse the data to see if the findings are different, and if so, this could be due to the need to tighten the research process or due to the fact that my knowledge has evolved in line with qualitative methodology: this suggests that knowledge is unstable and conditional.

I could also re-visit the themes that were deselected out of the Discussion on this occasion, and subject these to critical review and further exploration. Finally, I would re-visit the literature that was deselected in the Literature Review, subject this to critical analysis and determine how this impacted upon my perspective and how my thinking and knowledge have evolved.

6.5 Useful Guide to Researchers Investigating this Subject Area in the Future

In an attempt to help researchers investigating this subject area in the future, I have provided a table of ‘handy hints’ below which I have regarded as ‘really

useful' information, including anything that I would do differently if I were to repeat / extend the study in this subject area:

	Really Useful	Do Differently
Introduction	Although the introduction may be drafted at the start of the project, re-visit again at the end of the project and refine.	
Literature Review	Keep a list of all references used as you go along. I began this several months into the process and I should have started earlier.	Create a concept map for the Literature Review but don't be too ambitious, keep focused. Several concept maps may be created as literature search evolves – keep hold of these, date and add to the appendices.
Methodology	Be prepared to be flexible and adapt methods used for data collection if not appropriate when applied in dynamic outdoor environments.	Avoid using data collection methods that interrupt or delay activity time or require a certain amount of dexterity. Focus groups and semi structured interviews allowed participants to speak freely and produced the best (in-depth) results. Carry spare batteries for the Go-Pro as these were quickly depleted when filming underground and try to minimize head movements when filming.
Findings	Take advantage of opportunities to present your findings at a range of different conferences in order to disseminate your findings but also to gather feedback and critical review from academics, researchers and practitioners with industry knowledge and experience.	When presenting your findings at conferences, ensure you record it, particularly the discussion and questions that often follow the presentation so that you can refer back to these later and include this in your write up.
Discussion	Include photographs if it enables the reader / assessor to better visualize the context or to	

	understand the point being made.	
Conclusion	Refer back to the aims set at the beginning of the project. Have these been met? If yes, is this fully or partially? Evidence of this? If aims are not met, why not?	
References	Maintain a list of references from the start of your project, and keep adding to it throughout your project, in the style in which your references will be submitted.	Ensure you know how to reference accurately so that you can reference in the approved style from the start.
Appendices	Keep all concept diagrams / sketches etc. and date them, as this could be useful to include in the appendices to illustrate the development of ideas / ontology and epistemology over time.	Keep a record / list of appendices to include at the end of the project as you go along.

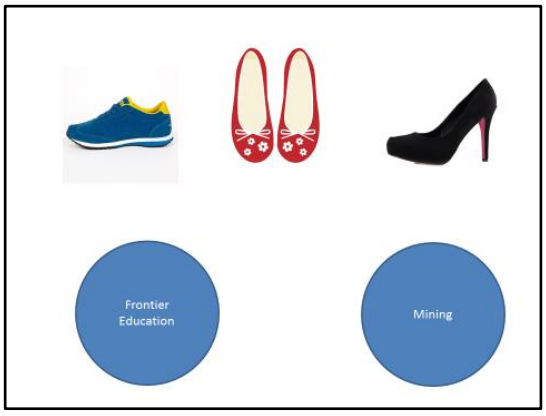
Table 6: Useful Guide to Researchers Investigating this Subject Area in the Future

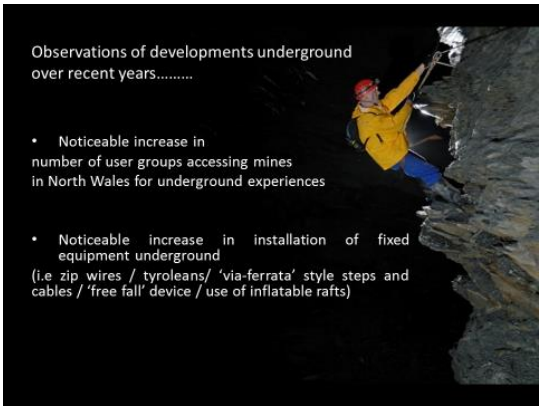
6.6 Conclusion

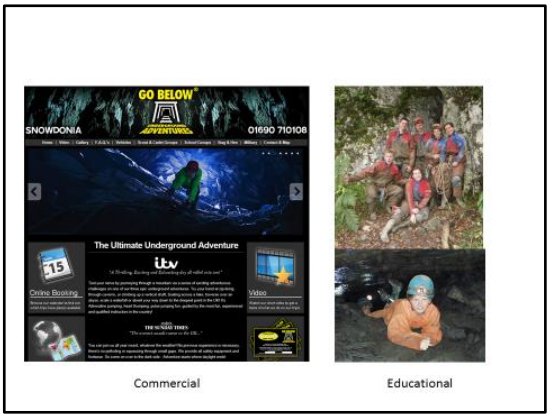
This chapter provided an evaluation of the aims, the research process and factors to consider if extending the project. Crucially, this chapter has also enabled a reflection of learning, highlighting how undertaking this research project has contributed to my personal development as a researcher, contributing to theory and practise, as well as enhancing my knowledge of the practice of caving and the role of caving (and outdoor adventure sports) for older adults.

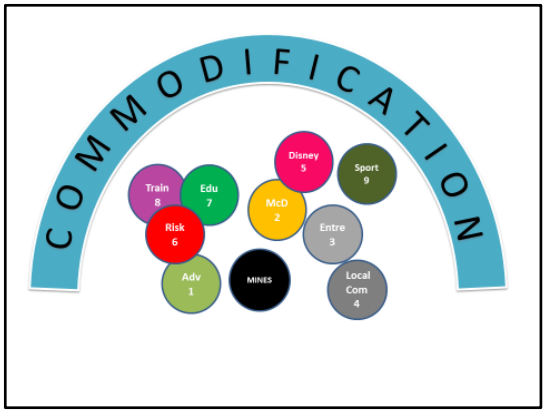
Appendix 1: The Evolution of the Direction of the Research Project

This appendix includes an example of the slides presented to my Research Degree Tutor at the start of my research journey (June 2015), before I enrolled on the MA(Res) in April 2016. This presentation and the critical feedback received was invaluable in the planning and decision making process, as it helped me to confirm the direction I wanted to take my project. It also demonstrates how my knowledge has evolved over this period of time, as these slides illustrate my initial conceptualisation of how the research project might be constructed and the direction it might take. I am now able to see the fundamental difference between my naïve and over ambitious conceptualisation of the research project (in June 2015) and the production of this informed research document (March 2018).









Appendix 2: Extract from Reflective Journal

This appendix includes an extract from my personal reflective journal which I kept throughout the research process. The journal provides a useful record of my progress throughout my research journey, highlighting any particular events that have influenced the development of my thinking and ontological approach. Below is a journal entry made on 10th July 2017, following the British Society of Gerontology Annual Conference at Swansea University.

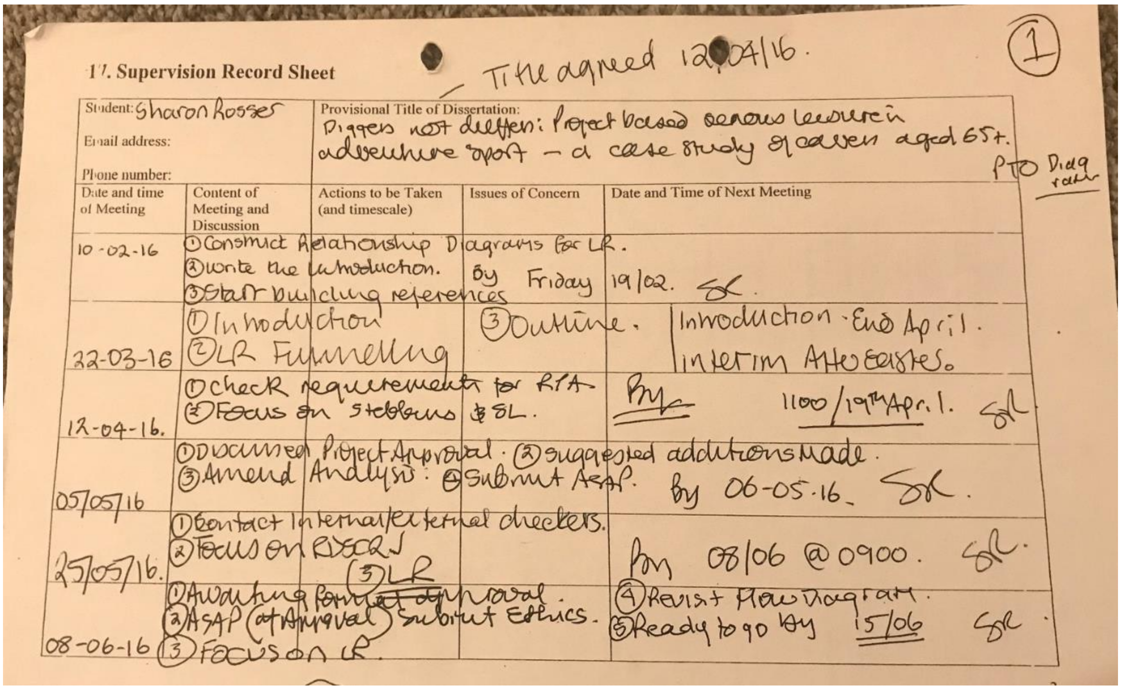
"I was particularly thrilled to have been accepted to present at this conference as it will allow me to present my findings to an audience of gerontologists / health professionals / academics and fellow researchers with an interest and specialism in the study of ageing (gerontology). I was also a little apprehensive – would my research be of interest to this audience?

I downloaded the programme beforehand and felt an enormous sense of pride that I was included on the programme – a 15min slot on Fri 9th July at 11.30am! There was a wide range of topics being presented (primarily related to health and the ageing process), but my presentation seemed to be the only one relating to older adults and outdoor adventure sports…

… (Following my presentation), one delegate from the BSG informed me of a special edition of the BSG journal which includes adventure / outdoor activities and they are looking for papers to submit – she recommended that I look at the BSG website and submit a paper for this – WOW! – I felt a sense of pride and completely honoured that my research was deemed worthy of future publication in a BSG Journal. I will definitely follow this up".

Appendix 3: Record of Meetings with Director of Studies

This appendix includes an example of a 'Supervision Record Sheet' kept by my Director of Studies, to record our meetings, with targets set of tasks to achieve by the next meeting. As a novice researcher, this record proved invaluable to me in managing the project in small chunks, making the whole project seem more manageable and less daunting. It also allowed for an easily referenced record of the evolution of both my thinking and the project.


17. Supervision Record Sheet

Title agreed 12/04/16.

(1)

Student: Sharon Rosser

Email address:

Phone number:

Provisional Title of Dissertation: Diggers not drifters: Project based serious leisure in adventure sport – a case study of cavers aged 65+.

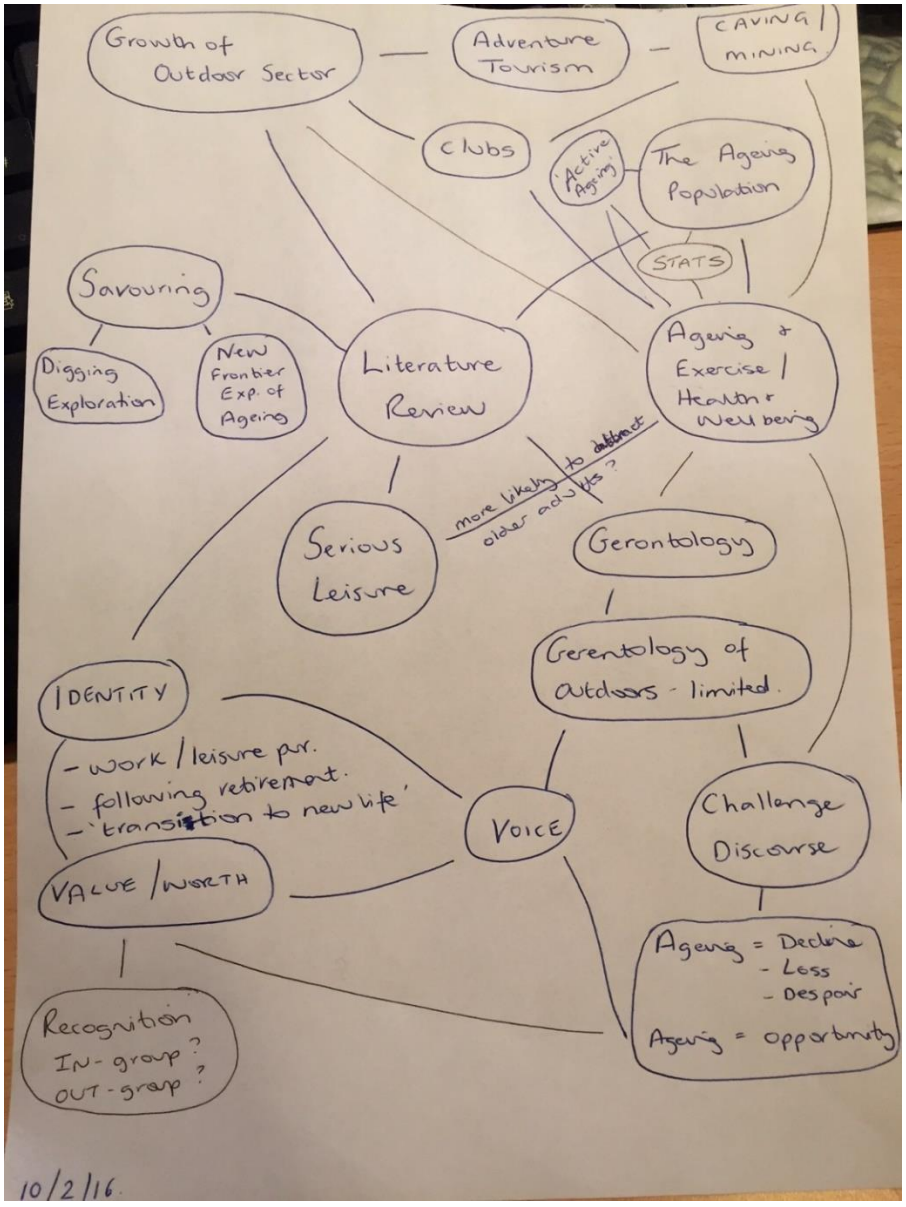
PTO Diag

Date and time of Meeting	Content of Meeting and Discussion	Actions to be Taken (and timescale)	Issues of Concern	Date and Time of Next Meeting
10-02-16	(1) Construct Relationship Diagrams for LR. (2) Write the introduction. (3) Start building references		By Friday	19/02. SL.
22-03-16	(1) Introduction (2) LR Funnelling		(3) Outline.	Introduction - End April. Interim After Easter.
12-04-16.	(1) Check requirements for RIA (2) Focus on stakeholders & SL.			By 1100/19th April. SL.
05/05/16	(1) Discussed Project Approval. (2) Suggested additions made. (3) Amend Analysis. (4) Submit ASAP.			By 06-05-16. SL.
25/05/16.	(1) Contact internal/external checkers. (2) Focus on [illegible] (3) LR			By 08/06 @ 0900. SL.
08-06-16	(1) Awaiting formal approval. (2) ASAP (of Approval) Submit Ethics. (3) Focus on LR.			(4) Revisit Flow Diagram. (5) Ready to go by 15/06 SL.

Supervision Record Sheet (08/06/16)

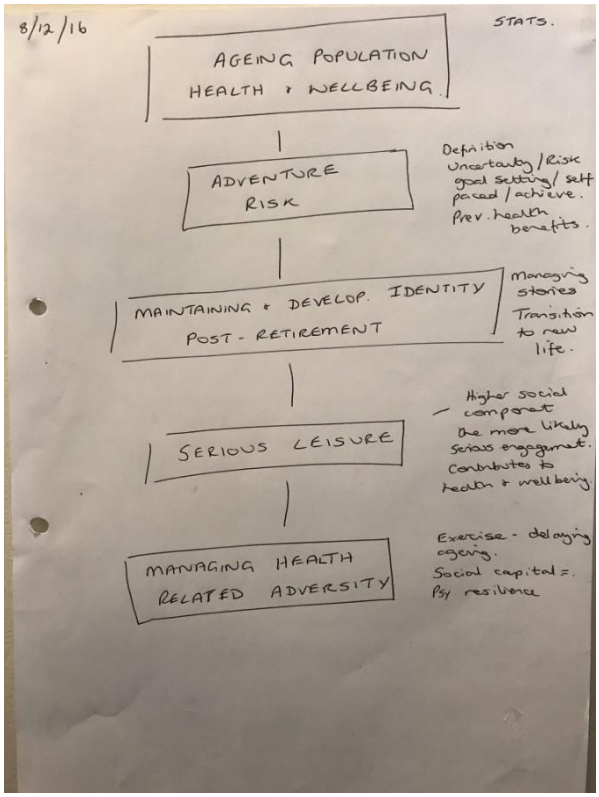
Appendix 4: Literature Review Concept Diagrams

This appendix includes a number of concept diagrams which illustrate the evolution of the conceptualisation of the issue and the systematic identification, acquisition, representation, and management of secondary data to be included in the Literature Review. These diagrams also highlight my personal journey in the evolution of my epistemology from a naïve to a sophisticated standpoint resulting in the process of selecting and deselecting literature to include in the literature review.

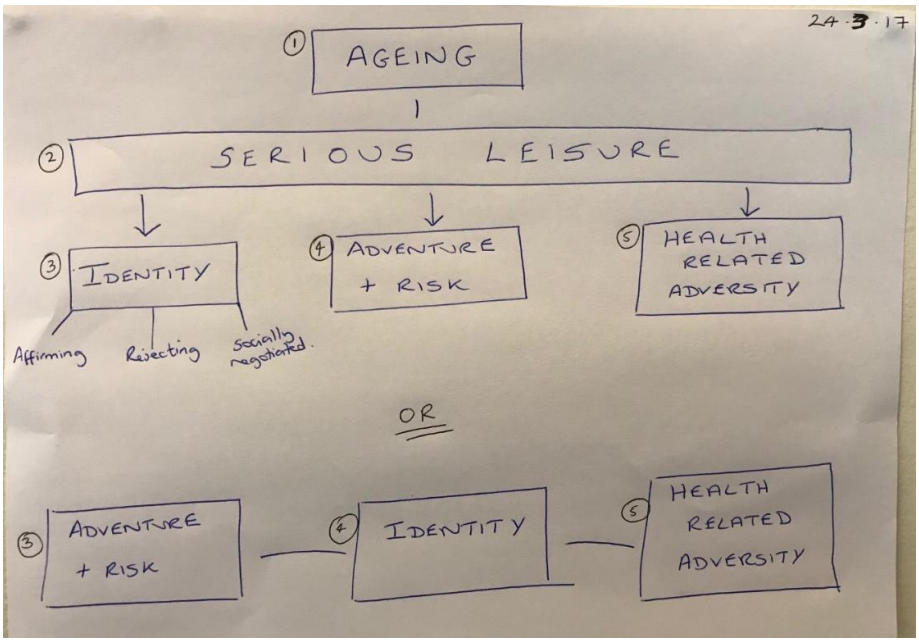


Literature Review Concept Diagram 1 (10/02/16)

Not all areas originally identified in Concept Diagram 1 (dated 10/02/16) could be included in the Literature Review. The fundamental decision to select and deselect literature for inclusion in the Literature Review was made in order to remain within the scale and scope of the project and gain critical depth. The order and sequence of themes to be explored was carefully considered and the evolution of ideas is illustrated in Concept Diagrams 2 and 3.

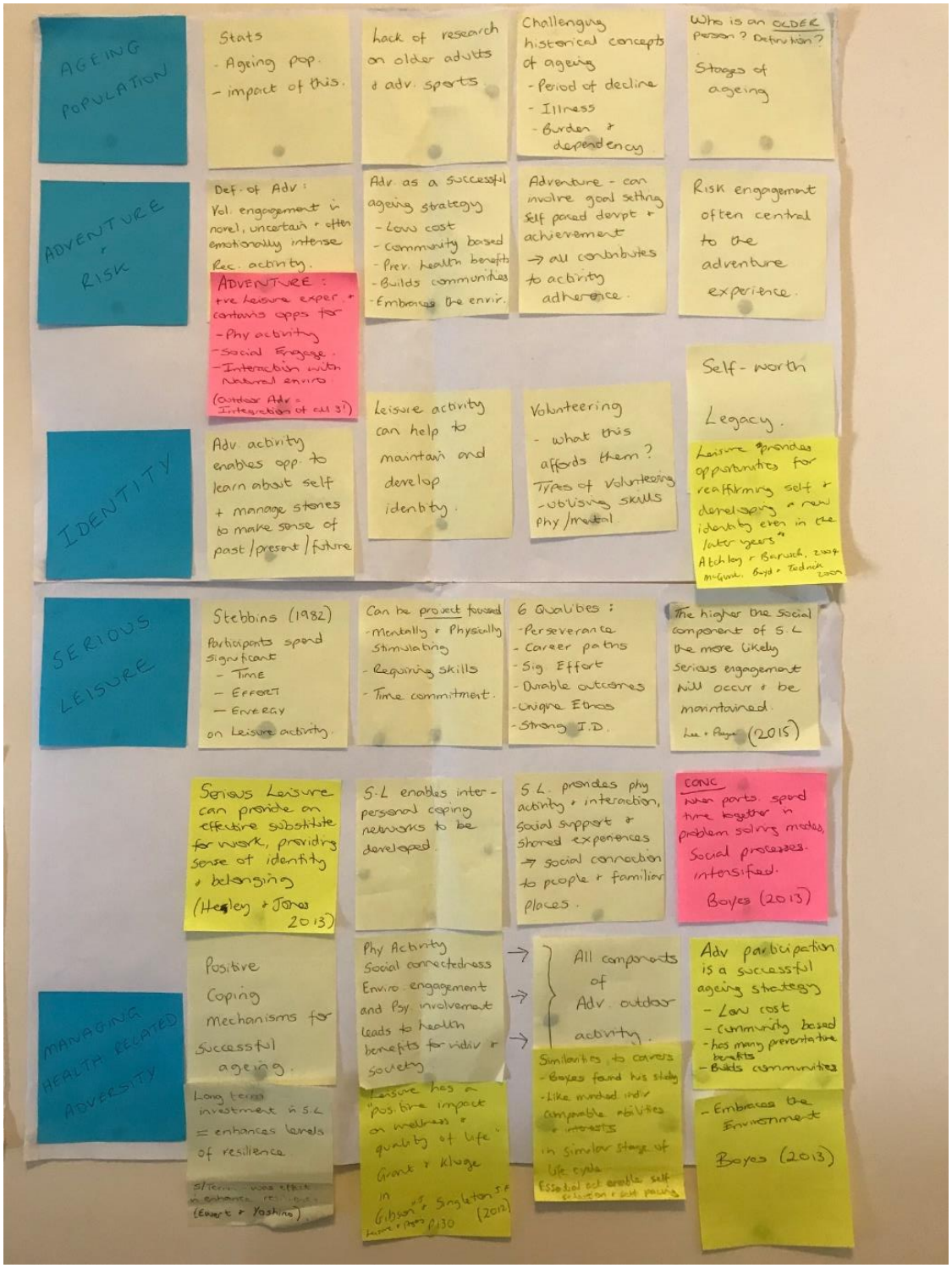


Literature Review Concept Diagram 2 (08/12/16)



Literature Review Concept Diagram 3 (24/03/17)

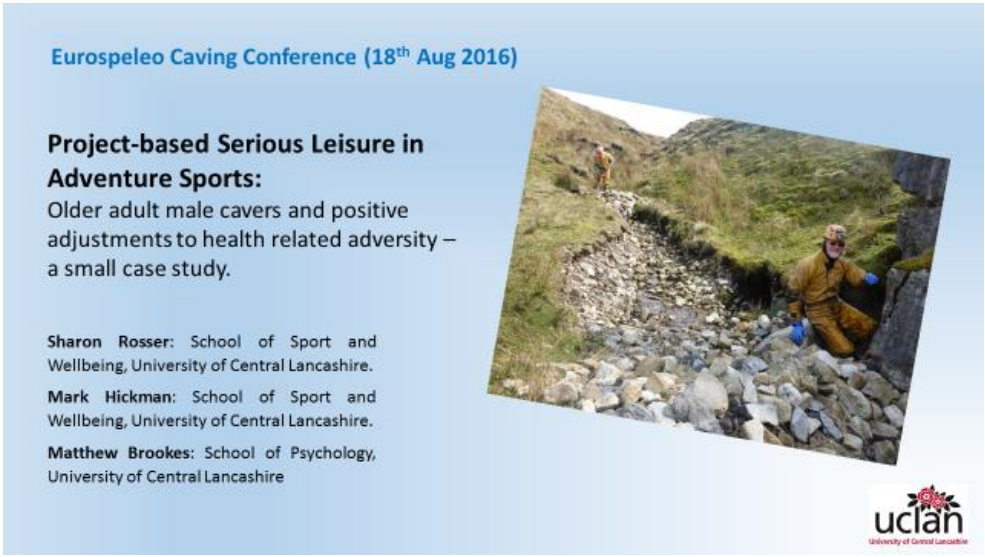
As a kinaesthetic leaner who prefers to visualise the links and relationships that exist between emerging themes, I found using post-its on the wall (Concept Diagram 4) an effective way of systematically identifying, analysing, representing and managing secondary data to be included in the Literature Review.



Literature Review Concept Diagram 4 (31/03/17)

Appendix 5: Opening Slides / Posters for Conference Presentations

The following 6 opening slides illustrate the range of conferences attended where I have presented the findings of my study to academics / researchers / practitioners and gerontologists as part of my dissemination strategy. Each presentation focused on a different theme in order to obtain critical feedback which was essential for the process of selecting / deselecting themes for inclusion in this study.



IOL and AHOEC National Conference (14th October 2016)

Growth in action: Adventure sports and personal learning past the age of 65.

Sharon Rosser: School of Sport and Wellbeing, University of Central Lancashire.

Mark Hickman: School of Sport and Wellbeing, University of Central Lancashire.

Ali Inkster: School of Sport and Wellbeing, University of Central Lancashire.

UCLan's 3rd International Health and Wellbeing with Real Impact Conference: 'Think Globally, Act Locally: Health and Wellbeing Across the Life Course' (6th June 2017)

"Another Kind of Life: The potential of Serious Leisure to support resilience to Health Related Adversity"

Sharon Rosser: School of Sport and Wellbeing, University of Central Lancashire.

Mark Hickman: School of Sport and Wellbeing, University of Central Lancashire.

BSG 2017 Annual Conference : Swansea University (5th – 7th July 2017)

"Going dark : Serious leisure, adventure volunteering and older male cavers"

Sharon Rosser: School of Sport and Wellbeing, University of Central Lancashire.

Mark Hickman: School of Sport and Wellbeing, University of Central Lancashire.

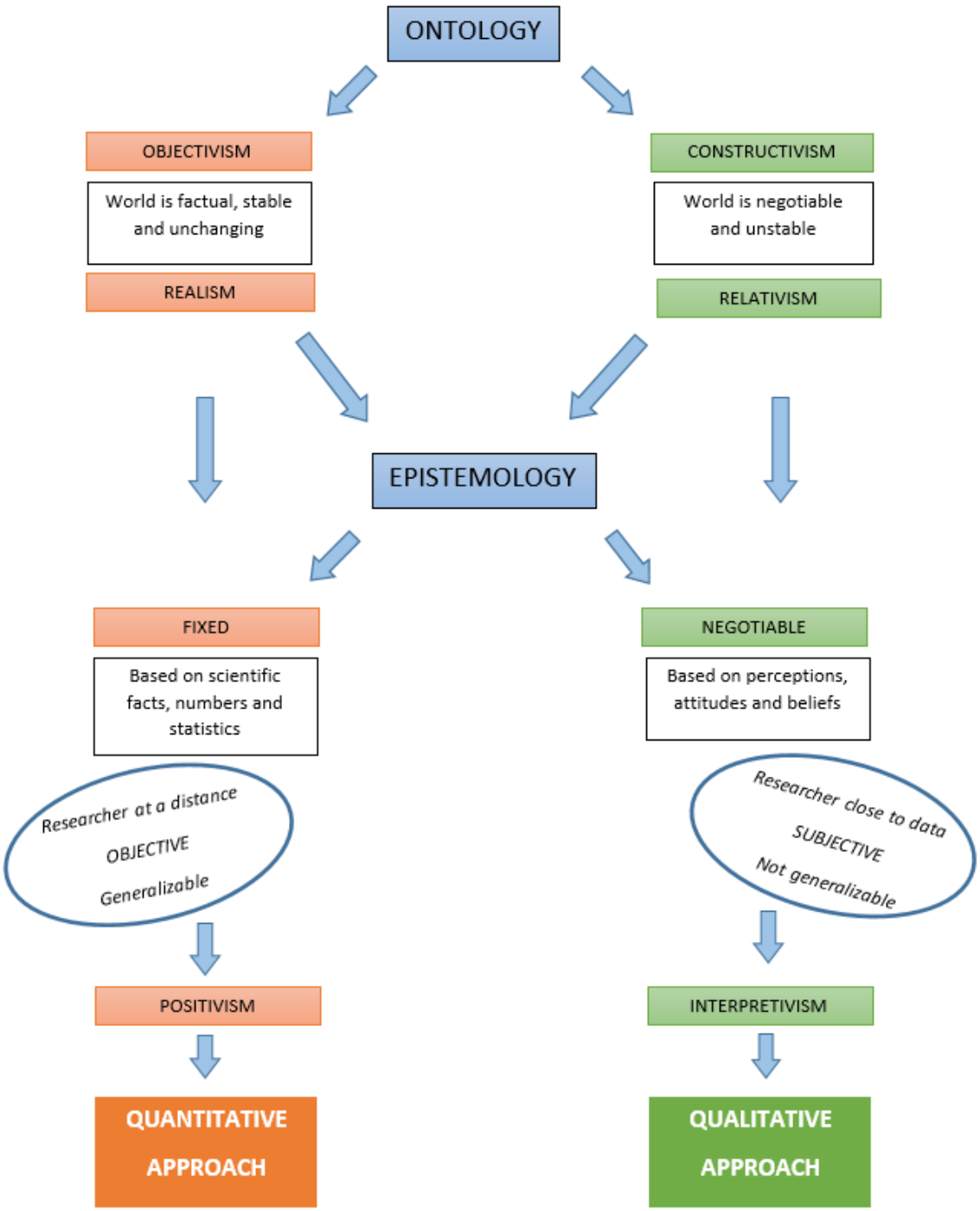
Myles Harris: South Bank University

Poster presentation for IOL Conference North West Region, 26th Jan 2018

Creating a poster presentation for this conference was a useful exercise, in selecting and deselecting key information to include on the poster. This also formed part of my dissemination strategy, sharing the findings of my study with fellow researchers, academics, professionals and practitioners.

Appendix 6: Ontological and Epistemological Considerations

This appendix illustrates my conceptualisation of ontology and epistemology. As a kinesthetic learner, this diagram shows how I personally relate this to the two main methodological approaches (qualitative and quantitative) used in social research.



Appendix 7: Data Collection in Dynamic Challenging Environments

Right from the on-set, the intention was to collect data in context, in order that participants' channels of receptivity were open and by being in this familiar environment, it was believed that participants would provide their most honest responses. However, due to the difficulties faced by capturing data in a dynamically challenging environment, various data collecting methods were employed. The notebook and pencil and Digital Voice Recorder (DVR) in a waterproof case were of limited success due to the muddy and wet conditions found in this underground environment.

A Go-Pro mounted on my helmet provided a higher quality film than when it was mounted on a chest harness. However, not being used to having a camera mounted on my helmet, it proved extremely challenging to film underground without knocking the camera on the cave roof / walls, and covering it in mud. The camera mounted on a chest harness was of limited success as the view became obscured when negotiating small passages in the cave and having to turn sideways or flat on my back / front to negotiate tight passages.

These adaptations to my data collection methods illustrates the difficulties faced by the researcher when collecting data in an outdoor environment and how I have critically responded to dynamically changing situations.

Appendix 8: Participant Information Sheet

Participants were given an information sheet about the research project before giving consent to participate, so that they were fully aware of the process and methods to be used to collect data. Each participant confirmed his approval to take part and provided consent.

Working Title of Study: 'Project Based Serious Leisure in Adventure Sports - Diggers not duffers: a case study of cavers aged 65+'

Participant Information Sheet.
Please read the information below thoroughly before deciding whether or not to participate in this study.

Focus group/interview/observation information sheet.

You are being invited to take part in a research study being conducted as part of a MA (Research). Your participation is completely voluntary. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take some time to read the following information and feel free to discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information - our contact details are at the end. Thank you for reading this information sheet, which you should keep if you decide to take part in the study. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

This study will build on work that has been conducted over the past year into the perceptions of older adult climbers aged 65+. Although a great deal of research is currently investigating the implications of an ageing population there is little focus on the relationship between older adults and adventure sports. Perception from the 'active ager' will be sought in the specialist area of caving. The MA(Res) research pathway will be undertaken over a period of phases and years. This is the initial phases. Findings of this research will be disseminated through a number of routes such as journal publications, dissertation production and conference presentations.

What is the aim of this study?

The aim of this study is: to investigate the perceptions of cavers who are active in adventure contexts

This is due to the reasons enumerated briefly below:

1. There is an absence of research that examines the experiences of older adult cavers aged 65+.
2. Much of the research that has been conducted in outdoor adventure has focused on adolescents and young adults. Therefore, as we are experiencing an ageing population, there is a need to inform our understanding of the ways in which older adults' age in, and through, outdoor adventure.
3. The outcomes will be used as a platform for Research Informed Teaching (RIT) and curriculum development on vocational undergraduate degrees in Outdoor Leadership and Adventure Sports Coaching, for publication in academic and professional journals, and for presentation at conferences. Commensurate with the high ethical standards demanded from all UCLan researchers confidentiality will be maintained throughout and all efforts made to safeguard anonymity.

Who will be taking part in this study?

A sample group of ±4 cavers aged 65+. You have been selected as you fulfil the criteria for the research parameters.

Do I have to take part?

No you do not have to; it is up to you to decide whether or not to take part and your decision will be respected by the researchers. However, agreement even at this stage will require signed consent prior to commencement. Furthermore, at any time you are free to withdraw (without reason) at any stage of the data collection period.

What will I be asked to do if I agree to take part?

The focus group discussion / interview / questionnaire will be recorded, transcribed and analysed by the researchers. If you wish to review the transcript at any time, you may do so by asking Sharon Rosser at any time who can be contacted by email (srosser@uclan.ac.uk) or by telephone (+44-[0]1772-896375).

If you are willing to take part, please complete the attached Consent Form below.

Is there anything to sign?

You will need to sign the Consent Form prior to participation. This simply confirms that you have received sufficient information about the research project beforehand in order to make an informed decision whether to participate or not.

Are there any disadvantages or risks of taking part?

There are no identifiable risks associated with participation; you would be required to contribute some of your time to participate in a focus group with other participants and in follow up individual interviews with the researchers. Focus groups and interviews will be held at locations and times convenient to you. Care will be taken to ensure confidentiality and protect your anonymity throughout.

What are the possible benefits of taking part?

The study may provide new insights and perspectives that may be of interest to you and to the wider caving and active ageing community. You may request a summary of the findings at the end of the study.

What if I wish to withdraw from the study?

You are free to withdraw from the study at any time without giving a reason and without consequence. If required your responses will be securely destroyed. If it is impossible to disaggregate your data at the time of the request you will be informed. However, at this point in the project it will be impossible to identify individual contributions.

Confidentiality and anonymity.

If you consent to take part in the research you are assured that all the information that you provide will remain anonymous and kept strictly confidential. While identification of respondents might in some instances be possible from their responses, all efforts will be made to preserve confidentiality and anonymity. Any direct quotations selected for use in the final articles or presentations will use pseudonyms or codes, have any identifying material removed and will not be attributable to you.

Data Protection.

The data collected will be stored electronically on password-protected computers used only by the researchers. Data will be stored on UCLan password protected computers, and if in hard copy, in locked cabinets in a secure place. After completion of the project all data will be stored at the University in encrypted zip files. The tapes and transcripts of the interviews and focus groups will be kept for five (5) years and then destroyed in accordance with university policy.

What will happen to the results of the research study?

It is anticipated that the results of this project will be used to inform RIT, future publications or conference presentations (for example in, but not limited to, outdoor education, adventure tourism and active ageing and well-being). Any quotations you make which are included in the presentation of findings will not be attributable to you.

Who might I contact for further information?

If you have any questions about the project please contact: Sharon Rosser by email on srosser@uclan.ac.uk or by telephone on +44-(0)1772-896375.

Thank you for your interest in this research. If you would like to take part please complete and return the form below (by email to the above address, or hard copy to the researcher in person).

The research has been subject to internal ethics approval at UCLan however If you have any complaints or issues about the study please contact Dr Adrian Ibbetson, Head of School, School of Sport and Wellbeing, UCLan. ABIbbetson@uclan.ac.uk.

Appendix 9: Informed Consent

Before any research was conducted, all participants provided consent by signing the 'Informed Consent' form included in this appendix. This is a fundamental decision when conducting research to ensure ethical clarity.

Informed Consent

Research: 'Project Based Serious Leisure in Adventure Sports - Diggers not duffers: a case study of cavers aged 65+'

Researcher: Sharon Rosser **Participant Name** _____

Please read and **initial** each statement

- I have read and understand the participant information sheet. ____
- I understand what the project is about and what the results will be used for. ____
- I am fully aware of all procedures involving myself and of any risks and benefits associated with the study. ____
- I know that my participation is voluntary and that I can withdraw from the project at any stage without giving any reason and with no consequence upon myself, other participants or the research team. ____
- I agree to detailed notes being taken during the interview ____
- I agree to the recording and transcription of my interview ____
- I understand that anonymized quotes may be taken from me and used to illustrate general themes. ____
- I understand that the data [*field notes, interviews*] will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed. ____
- I agree to anonymized quotes being used within any publications or presentations resulting from this work. ____
- I agree to photographs and videos being used within any publications or presentations resulting from this work. ____
- I understand that the results will be anonymous and any quotations used will not be attributable to me. ____

- I would like to receive a copy of the results. ____

Name of Participant* Age* Date* Signature*

_____ _____ _____
_____

**Your name, date of birth/age, date and signature can be electronic.*

I certify that I have explained to the above individual the nature, purpose and possible risks associated with participation in this research study, have answered any questions that have been raised, and have witnessed the above signature.

Name of Researcher: Sharon Rosser Date Signature

Thank you in advance for your assistance with this project. Sharon Rosser
srosser@uclan.ac.uk +44-(0)1772-896375

Appendix 10: Questionnaire

This appendix includes the questionnaire used for phase 1 of the data collection. In order to maximise the time available and not to intrude on proceedings, questionnaires were completed on arrival at the dig. However, it was soon discovered that for some participants, completing a questionnaire was an onerous task, particularly when it is consuming precious digging time, or even the prospect! Participants tended to furnish short answers or even prefer to provide the answers verbally in order to get underground and dig as soon as possible.

Questionnaire Title of Study: "Project-based Serious Leisure in Adventure Sports: Diggers not duffers - a case study of cavers aged 65+"	
1.	When did you start a) Caving? b) (Cave) digging?
a) b)	
2.	What first attracted you to a) caving? b) digging?
a) b)	
3.	What factors built your interest in digging? Have these evolved over time?

4.	What opportunity for socializing does digging offer you?
5.	Do you consider yourself to be fit and healthy? Please explain your answer. If yes, how does caving contribute to this?
6.	Please comment on ways in which caving helps you deal with what you perceive as age or health related issues?
7.	What keeps you interested and motivated in digging?
8.	In your opinion, how important is your digging to the future of caving and the caving community?
9.	Do you take part in other adventure activities? If so, what are they? How do they compare to digging / caving?

10.	What skills and experience do you have which contribute to your digging projects?
11.	What excites you about your digging projects? Please explain your answer.
12.	How does your digging contribute to your sense of identity?
13.	Do you undertake any other form(s) of exercise in order to support the demands of digging?
14.	Do you engage in any volunteer work associated with caving? Please elaborate.
15.	What do you hope to contribute to caving?

16.	What are the challenges / barriers to your participation in the activity of digging / caving?
17.	Are there any other further comments that you would like to make at this stage? Please elaborate on your response.

Thank you in advance for your assistance with this project.
Sharon Rosser

Email: srosser@uclan.ac.uk
Tel: 01772 896375

I am happy to receive participant's responses by post / hard copy if this is more suitable to the participant – please phone for address details. Please note that if completed electronically the boxes will expand to fit responses, if this is required. Thank you very much for your time.

Appendix 11: Example of a Transcript from Semi- Structured Interview

The themes that emerged from the questionnaire (Phase One) were then used to underpin the structure of the semi-structured interviews that were carried out in Phase Two of the data collection process. This subsequently helped to identify the areas for further exploration and critical development. This appendix includes an extract of a transcript from these semi-structured interviews.

Sharon Fantastic. So thank you for filling in the questionnaires, I just wanted to discuss a few of the points that came out if that's okay. Just thinking back, we talked about some of these things earlier but if you wouldn't mind just elaborating on a few points that would be really helpful. Talk me through what motivates you to dig? What is it that drives you to meet every Monday?

Doug Exploring a cave is just wonderful and it's worth the effort to get to explore a bit of cave.

Sharon Brilliant.

Doug It really is lovely I mean it's a part of Britain that's never been known by man and there aren't many other places that haven't been ever visited by mankind. So it's a tremendous opportunity.

Sharon Yeah fantastic.

Alf Well for me, the only way now to get to do a new passage is to dig.

Dave Yeah.

Alf And part of it is also for the planning, the camaraderie with people in a like mind on a project and I like the projects and the main aim is to get to new passage.

Sharon Did you know each other before this project or has this project brought you together do you think as a team?

Doug Yeah we knew each other.

Alf We knew each other vaguely, this has brought us closer together and got to know one another.

Doug Mondays we have a wonderful time.

Sharon Monday Club yes. And the other members of your team, did they join as part of this project or again did you know them before?

Alf I didn't know Ray until I was introduced to him by somebody else and they said, "Look this lad goes digging but he's nobody to dig with." And I were looking for somebody to dig with, this were before Doug joined us, so I dug other projects with Ray.

Doug But Ray's very keen isn't he, he's a good digger Ray.

Sharon So you were introduced to him as another digger?

Alf Yeah I mean he's Kendal Caving Club is Ray and I were introduced to him by a lad up at Red Rose.

Sharon Okay.

Alf And he said, "This lad's looking for somebody to dig with."

Sharon And he's free on a Monday.

Alf And he's free all the time because he's not married.

Sharon ((laughs)) Excellent.

Alf So we get on well together and we enjoyed doing the projects we did and we found bits and bats to do with caving.

Sharon Fantastic. So you mentioned the camaraderie do you think that's a key benefit that something comes out of your Monday clubs?

Alf Yes. I think it sorts out people.

Doug Sorts out ((laughs))

Alf You get people that come once and you never see again but then like Tony came along, joined us and then got part of it and it he's a key part of it now as is Doug.

Sharon Yeah hooked, you're hooked on it aren't you? And you mentioned at the time that it keeps you fit.

Doug Yes it's very strenuous yes and it helps keep you fit which we all need don't we as we get old and rusty? ((laughs))

Appendix 12: Colour Coding Analysis

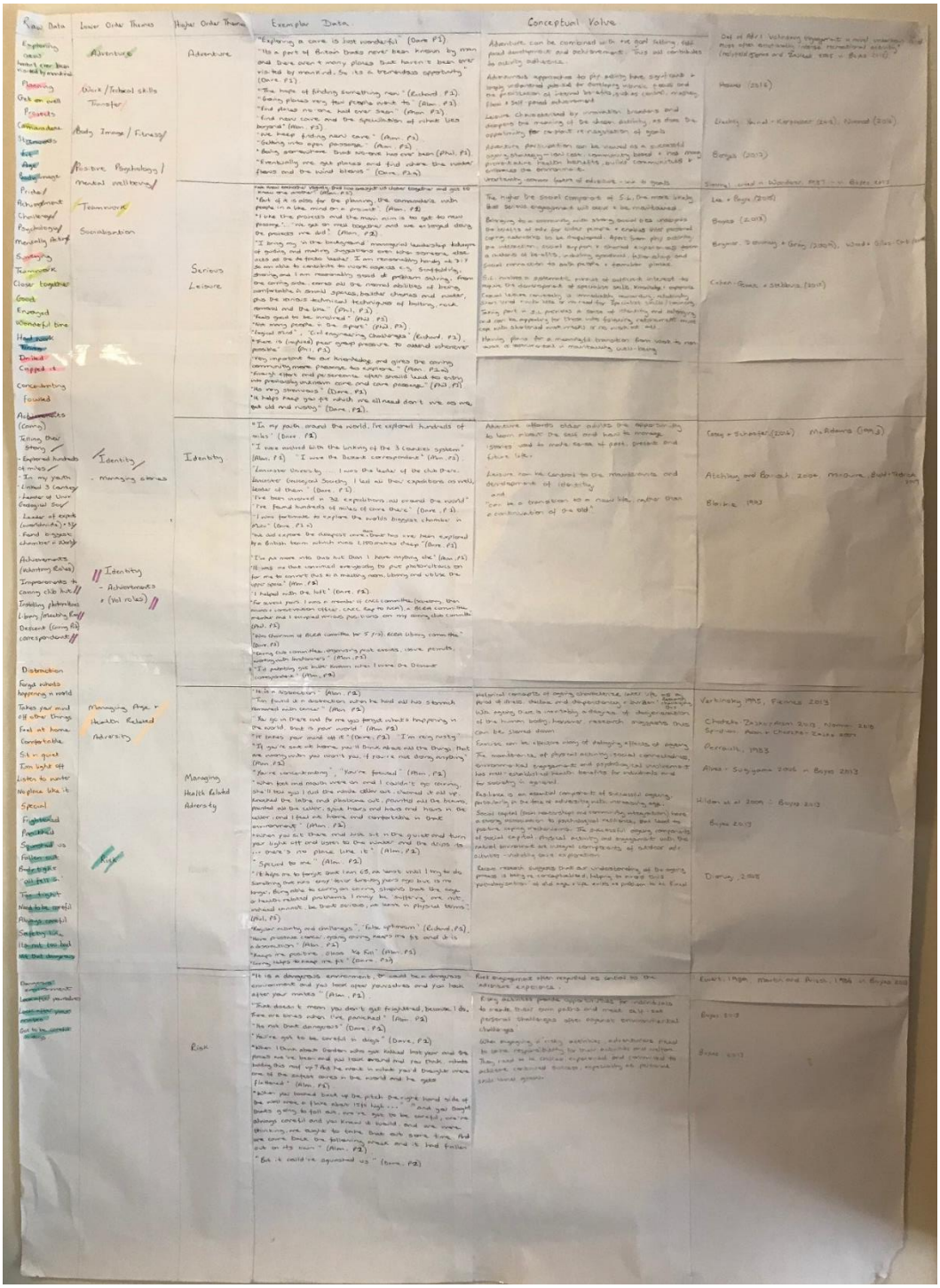
For the manual colour coding analysis, words (raw data) that were linked by a common theme were identified using different coloured highlighter pens, which enabled me to sort the text into different categories. This allowed for the data to be categorised and organised into 'lower order' themes, which were then subsequently grouped together into 'higher order' themes. As a kinaesthetic learner, I selected this method as my preference is to sort and see patterns or connections visually. This appendix provides an example of this manual data analysis using colour coding.

Example Raw Data	Lower Order Themes	Higher Order Themes
Exploring New Haven't ever been visited by mankind	Adventure	**Adventure**
Frightened Panicked It could've squashed us Body tight Need to be careful Always careful Safety Line It's not that dangerous Look after yourselves, look after your mates	Risk	**Risk**
Planning Surveying Project Drilled Capping	Project / Transfer of Technical skills	**Serious** **Leisure**
Team work Closer together Enjoyed Camaraderie Get on well Wonderful time	Teamwork / Socialisation	
Mentally active Achievement Challenge Problem solving Pride Psychology	Positive Psychology / Mental Well being	

Fit Strenuous Age Body image Hard work	Body image / fitness	**Managing Health Related Adversity**
Distraction Forget what's happening in world Takes your mind off other things Feel at home Comfortable Sit in quiet, turn light off, listen to water No place like it Special	Managing Health Related Adversity	
Explored hundreds of miles In my youth Successful digs (Linked 3 counties) Leader of 32 expeditions Leader of University Club / Geological Society Significant finds (biggest chamber in the world – Mulu)	Identity – telling stories	**Identity / self-worth**
Achievements – improvements to club hut (installing photovoltaics, library, meeting room) Regional correspondent – caving publications Committee member – Regional and National.	Identity – voluntary roles	

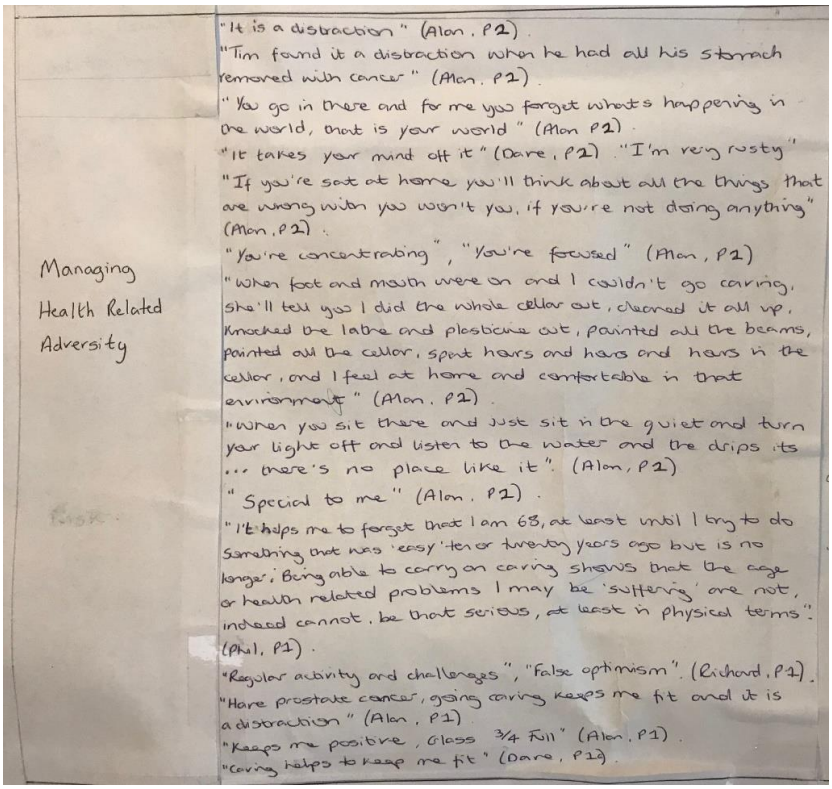
Appendix 13: Data Analysis including Themes and Conceptual Value

As a kinaesthetic learner, I found it more manageable and easier to visualise the relationship between lower order and higher order themes when these were presented on a large sheet of paper on my wall (approx. 1m x 1.5m), along with exemplar data and conceptual value.

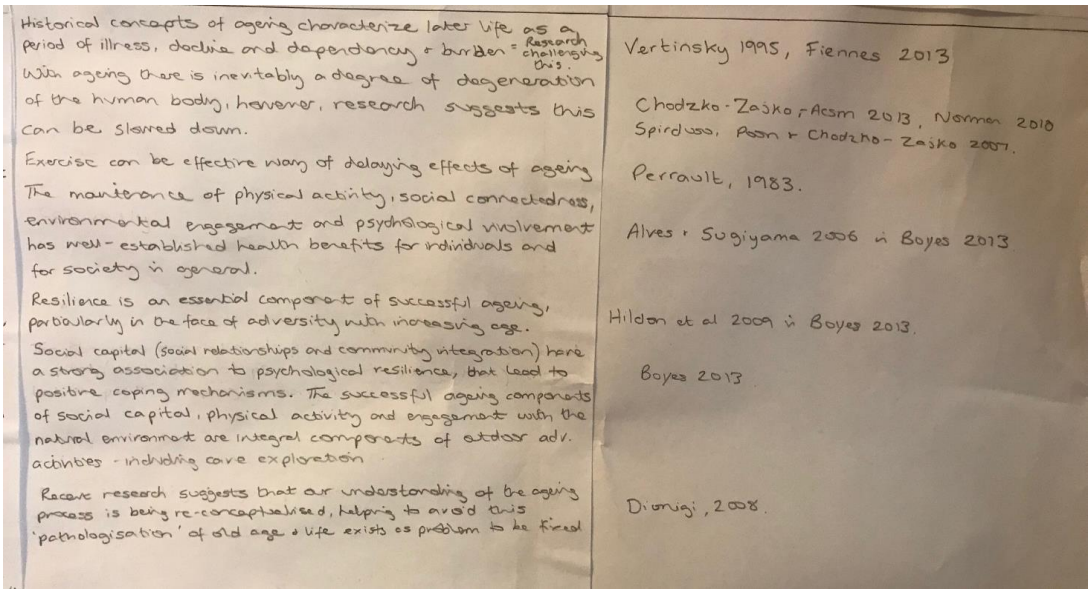


The photographs below are an extract from the large sheet on my wall, as illustrated (148). The photographs illustrate the exemplar data and conceptual value identified for one of the themes – Managing Health Related Adversity.

Exemplar data for the theme: Managing Health Related Adversity



Conceptual Value


Historical concepts of ageing characterize later life as a period of illness, decline and dependency + burden = Research challenging this.
With ageing there is inevitably a degree of degeneration of the human body, however, research suggests this can be slowed down.
Exercise can be effective way of delaying effects of ageing
The maintenance of physical activity, social connectedness, environmental engagement and psychological involvement has well-established health benefits for individuals and for society in general.
Resilience is an essential component of successful ageing, particularly in the face of adversity with increasing age.
Social capital (social relationships and community integration) have a strong association to psychological resilience, that lead to positive coping mechanisms. The successful ageing components of social capital, physical activity and engagement with the natural environment are integral components of outdoor adv. activities - including cave exploration
Recent research suggests that our understanding of the ageing process is being re-conceptualised, helping to avoid this 'pathologisation' of old age + life exists as problem to be fixed

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Spirduso, Poon + Chodzko-Zajko 2007.

Perrault, 1983.

Alves + Sugiyama 2006 in Boyes 2013

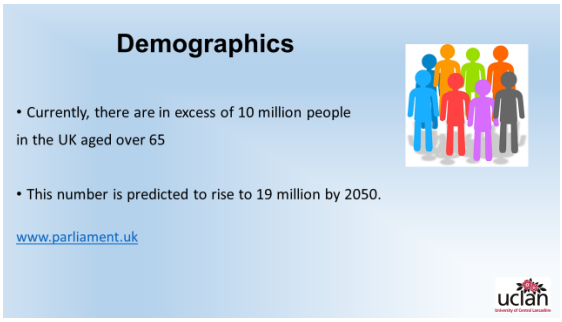
Hilden et al 2009 in Boyes 2013.

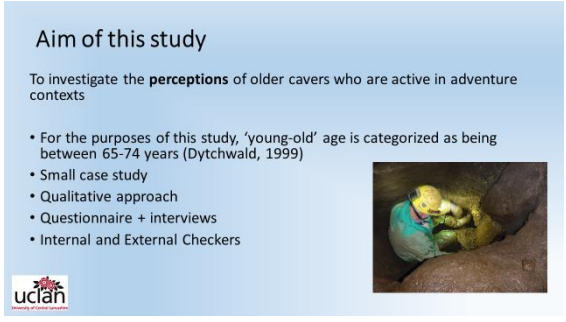
Boyes 2013

Diomaji, 2008.

Appendix 14: Adventure Sports Coaching Conference Presentation (11th – 12th January 2018).

This appendix includes the slide presentation for the Adventure Sports Coaching Conference held at Plas y Brenin, The National Mountain Sports Centre. The question / answer session and discussion which followed my presentation and the critical feedback personally received proved to be invaluable in developing new perspectives, and reflect the evolution of learning on my post graduate journey. Crucially, the feedback received also demonstrates the potential impact of my research on practice in the 'real world'.





Emerging themes :

- Adventure
- Risk
- Identity
- 'Serious leisure'
- Positive adjustments to health related adversity

Positive adjustments to health related adversity

- **Opportunity to solve problems / overcome challenges**

"Regular activity and challenges" (Ray)

"I like the projects, the main aim is to get to new passage" (Alfie)

- **Mentally stimulating**

"Its like pitting my wits against nature" (Alfie)

"The speculation of what lies beyond, it helps keep me positive, glass ¾ full" (Alfie)

Positive adjustments to health related adversity

- **Keeping physically fit and active**

"Its very strenuous. It helps keep you fit which we all need don't we as we get old and rusty" (Doug)

"Caving keeps me fit and is a distraction" (Alfie)

Positive adjustments to health related adversity

- **Utilise skills and experience**

"I bring my in the background managerial leadership technique of guiding and making suggestions… I am reasonably handy at DIY so am able to contribute to work aspects, e.g scaffolding, shoring up and I am reasonably good at problem solving" (Peter)

"Logical mind and civil engineering challenges" (Ray)

Positive adjustments to health related adversity

- **Social interaction / camaraderie**

"We knew each other vaguely, this has brought us closer together and we got to know one another" (Alfie)

"Part of it is the planning, the camaraderie with people in a like mind on a project" (Alfie)

Positive adjustments to health related adversity

- **Distraction from everyday life / illness**

"It's a distraction. You go in there and for me you forget what's happening in the world" (Alfie)

"It helps me to forget that I'm 68" (Peter)

"If you're sat at home, you will just think about all the things that are wrong with you" (Alfie)

"It takes your mind off it. I'm very rusty" (Doug)

Positive adjustments to health related adversity cont…

- **Enhance self worth / value / identification**

"It feels good to be involved" (Peter)
"Very important to our knowledge and it gives the caving community more passage to explore" (Alfie)

Activities such as caving can provide a psychological buffer to threats to identity

Leisure activities can be central to the maintenance and development of identity (McGuire, Boyd & Tedrick, 2007)

Adventure sports offer a wide range of long-term benefits for older adults (Boyes, 2013; Howes, 2016).

What do adventure sports offer?

- **Self-paced nature of activities**
- **Connectedness to the natural environment**
- **Potential for high levels of social interaction**

This contributes to their *alternative value*
(Holowchak & Reid, 2011; Hickman et al, 2015; Hickman, Inkster & Rosser, 2017).

Stebbins (2009) suggests that ***'nature challenge'*** activities (NCA) focus on challenges encountered in particular natural environments (air, water, land, animals, plants, ice or snow).

"The special (aesthetic) **appeal of the natural environment** in which this process occurs simultaneously **sets the challenge** the participant seeks" Stebbins (2009)

NCA activities – Serious Leisure

'Serious Leisure'

Stebbins (1982):

When participants spend "**significant time, effort and energy on a leisure activity**".

- **Perseverance** to overcome difficulties
- **Mentally** and **physically** stimulating
- Requires **skills**
- **Social Interaction**, belongingness, self enrichment
- **Unique ethos**
- **Strong Identification**

Using 'nature challenge' activities (Stebbins, 2009) within a project-based serious leisure framework enables:

a) Sustainability of effort and commitment

The higher the **social component** of 'serious leisure' the **more likely** serious **engagement** will occur (Lee & Payne, 2015)

b) A platform for dealing with health-related adversity

- Development of social relationships
- Enhancing resilience
- Supporting well being

To Do Before Death (Included in 'Poems Inspired by Fine Country Life in the Yorkshire Dales', Dave Checkley)

What do you want to do before you die
Its hard to answer but first think of why
When you leave what will you leave behind
What will be thoughts left in people's mind
Will your friends and family be very sad
Or will your vacant space make them glad
If you leave money where will it all go
Given to a charity or to help the children so
Then think of the things that you have made
To help the world when you're in the grave
To answer this the biggest problem of them all
Is we don't know the time when we will fall

As we all get older the rust it starts to tell
We creak and our bodies are never fully well
The good news is that we now live longer
Giving us more time when we are stronger
Strong enough to outlive our happy dreams
But dreams are never as easy as it seams
We have to take our chances when we can
As time goes flying by waiting for no man
There are so many projects yet to complete
So before leaving I'll be rushed off my feet
When working hard we must never forget
That we can't take things with us I regret

Thank you

For more information please contact: **Sharon Rosser**
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Value this literature has to this research:

Bolton provided me with a more in-depth understanding of how to implement colour-coding analysis as a novice and inexperienced researcher. Given the scale and scope of the study, this proved to be a manageable and effective way of analysing my data, manually reading the data and using a sorting process to identify themes.

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Hefferon and Gil-Rodriguez acknowledge the pressure that researchers often experience to include too many participants in line with quantitative research. Hefferon and Gil Rodriguez recognized that 'less is more' in qualitative research as fewer participants examined at greater depth is preferable to a broader, shallow and simply descriptive analysis of many. I therefore capped the sample size, which also helped in keeping the project manageable and within the scale and scope of a Masters research project.

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Howitt and Cramer (2016) stressed the importance of not being too ambitious when selecting tools for data analysis in order for the project to remain manageable. As a novice researcher, this proved to be valuable for this research project, as the data analysis applied was appropriate and manageable for the scale and scope of this research at Level 7.

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