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**Chwaraeon, Iechyd ac
Addysg Awyr Agored**

**Sport, Health and
Outdoor Education**

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1. Community Supported Agriculture: A literature review to explore the potential benefits to communities', farmers and if it contributes to better food security.

The aim of the review was to determine the importance Community Supported agriculture and if it can positively contribute towards food security. It aimed to identify issues associated with Community Supported agriculture, its ease of use and if its affordable for everyone. It will identify how community supported agriculture works and looks at what it means to the community and local farmers.

Method

An initial search of the internet was undertaken to determine whether enough resources were accessible in order to complete the research. Key words were identified and used in the search such as Food Security, Community Supported Agriculture, nutrition and Brexit. The library at University of Wales Trinity St. Davids was visited which gave me access to resources such as journals and books, but due to the circumstances surrounding the pandemic had to continue online. A literature-based dissertation in light of the situation was an obvious choice. Community Supported Agriculture was extensively researched, identifying scheme's location and whether they were utilised by communities. Consideration was then given to community supported agriculture in regard to food security, farmers and Brexit.

Findings

The research was relevant to the aim and also the objectives. It recognised that community supported agriculture could be of great benefit to society, farmers and food security as it is based on ethical measures which can do nothing but contribute to a better food system. It is also important to recognised that the research showed lack of accessibility was a problem and affordability. Although it has been recognised that much research needs to be achieved as the majority of previous research up until now is slightly dated and, whilst considering the current situation in regard to Brexit and the pandemic over the last year it may be worth visiting the idea further. Paying attention to community supported agriculture projects which are currently active would be a good recommendation for future research, and noting the motivation for community's joining these schemes would possibly benefit the progression of more schemes. The research also suggests that community supported agriculture projects provide a safe food option, usually organic and secure with no access to shops especially as the pandemic has seen vulnerable people unable to visit the shops either through choice or through being afraid.

Conclusion

The research indicates agriculture has become a concern as the nation enters Brexit. It looked at in regard to how agriculture in the community is important for food security. A definition of food security was produced by the world summit and has been looked at in regard to Community Supported Agriculture. The research clearly illustrates its potential benefit, but it also raises the question of access and affordability to the section of the community currently supporting themselves on a lower income. If the definition of food security is correct, then community supported agriculture could benefit from a safe and nutritious aspect.

2. A Literature Review Investigating the Possible Effects of Surfing on Mental Health and Wellbeing.

This literature review focuses on five studies based around surf therapy programmes and how the results from these can be used to promote the use of surf therapy for those struggling with health and wellbeing issues as a result of Covid 19 and the resulting lockdowns. The surf therapy programmes focus on helping selected groups in coping with psychological, physiological and sociological issues. The Programmes take place in three different countries over three different continents. Three of the studies are in the United States, one in the United Kingdom and the other in South Africa. A range of different participant groups are the focus for these programmes, two focussing on vulnerable children/ young adults, one focuses on US military veterans struggling with range of health and wellbeing issues, another on serving members of the US military suffering from PTSD and MDD, some in comorbidity and others with either condition separately. The other study focussing on adapting an existing surf therapy programme for children suffering from ASD. Varying methodologies used for gathering data for each study differs making comparisons between the studies difficult. However, all studies had positive results with their chosen groups. Reductions in anxiety and depression levels standing out in the studies focussing on US military veterans and serving member of the US military with PTSD and MDD. The two studies focussing on vulnerable young/ young adults highlight that participants displayed greater levels of hope and aspiration for the future. All five of the studies highlight that all participants benefited greatly from social interaction elements of the programme and that their psychosocial health and wellbeing was greatly improved upon. This literature review discusses the strengths and weaknesses of each study and the need for further research into why surf therapy offers the benefits it does. Possible reasons for lack of scientific evidence and in-depth long-term data are highlighted as being down to the fact that surf therapy intervention is a relatively new concept still in the development phases. However, one of the papers is an evaluation into a surf therapy programmes delivery conducted over a four-year period, developing as it progressed focussing on vulnerable children/ young adults. This paper offers a baseline for future study comparison and also offers suggestions about how it can be tailored for use with other focused groups. Also listed are reasons a structured surf therapy programme could be beneficial for those who have struggled with a verity of differing health and wellbeing issues as a result of Covid 19 and the resulting lockdowns. These five studies based around surf therapy interventions are linked with current studies focussing on those effected by Covid 19 and lockdowns. Comparisons of conditions are linked and how the participants of the surf therapy programme have benefitted, with suggestions made as to how this can be applied to those suffering similar conditions as a result of Covid 19. Overall, the five papers chosen, highlight positive outcomes regarding participants' mental health and wellbeing and particularly social health and wellbeing.

3. How does child play in the outdoors develop physical literacy?

The purpose of this project is to look at how does child play in the outdoors develop physical literacy. The age range of the Foundation Phase is three to seven and this was the target audience for this study. Three aims were developed to be able to achieve answering the project question; these included: to develop an understanding of how skills learnt in the Foundation Phase promote outdoor activities; to develop an understanding of how play can support physical literacy; and to develop an understanding of the relationship between physical literacy and outdoor activities. Different types of play were considered within the study although the main forms of play referred to in the study were outdoor play and exploratory play.

The study is a literature based analysis and this type of study was chosen because of the circumstances of COVID-19. This type of dissertation was also chosen because all the research collected where from peer reviewed journals, government / educational documents such as the Foundation Phase were also used while organisational sites that specialised in play.org were also used to give different insights to different topics within the study. This study will also look at different countries Italy, New Zealand and Scandinavia as these cultural approaches were influential in helping develop the Foundation Phase Curriculum

The key findings of this study were that play, the outdoors and the Foundation Phase all had a key role in developing a child's physical literacy. The study found that outdoor play can aid the child's development in physical literacy by providing a range of natural materials such as rocks, sticks and logs and that these aided the child's sense of balance and risk of danger far more than indoor play. The study also implied that encouraging outdoor activities is important, not only to developing physical literacy, but also for developing social and cognitive development. An overview of the research shows that outdoor play can aid development in children throughout the Foundation phase.

If this study was conducted again this topic area could be built upon by conducting interviews with Foundation Phase teachers and handing out questionnaires to be able to compare the views of the teachers to the research previously collected in this study. COVID-19 prevented this because of home schooling and lack of time teachers had. Outside factors would also be considered such as parenting and extracurricular activities as these can also have an impact on a child's physical literacy.

4. What are the Motivations to take part in Outdoor Adventurous Education (OAE)?

The independent project investigates the motivations of UWTSD OAE degree Students, Lecturers and Graduates for engaging in outdoor adventure education (OAE). The study aims to understand if education and life experience influence participants motivations, and if there a difference between the motivations of students, lecturers and graduates? A comprehensive in-depth review of the past adventure motivation literature was generated to accompany the study. Early research on motivation suggested that 'psychological needs and expected outcomes caused people to engage in outdoor activities such as recreational pursuits and led to the development of Self -Determination Theory (SDT)' (Deci & Ryan, 2017). Thus, SDT was used as the leading theory on OAE motivations in this study. A two-part qualitative methodology was used to best conceptualise the motivations. Nine participants (mean age 30 years old) completed a questionnaire and two of the participants (student n=23 and graduate n=29) were interviewed using a pre-made interview guide. Using thematic analysis and SDT to inform the approach, the results show the participants motivations can be categorised into four themes: competence (challenge, achievement and goal orientation), autonomy (emotional well-being, freedom and escape), relatedness (social and environment) and lastly others (fun, motivation change and risk). The findings indicate that not only does life experience and education influence the participants' motivations, but there are several motivational barriers to engagement in OAE, such as weather, social and financial. However, the researcher could not conclusively say that there is a significant difference between the motivations of the student, lecturers and graduates other than the impact life experience have on the motivations to engage in OAE. The interview findings show that the student is more motivated by relatedness (social interaction and environment), however, the graduate is more motivated by competence (challenge, achievement and goal oriented). Additionally, the findings indicate that Covid-19 had influenced the participants understanding of their motivations. Due to Covid-19, OAE businesses and programs should contemplate the "strategies, tactics, and policies they need to change to stay relevant and increase their effectiveness in achieving their missions" and understanding OAE participants motivations will aid in informing the strategies used (Ewert and Davidson, 2021). Also, awareness of the underlying reasons and factors can inform instructors/guides/coaches on how they can best support and facilitate the participant's experience (Pomfret and Bramwell, 2016). The literature review and the research findings show that there is a need for further research into the impact Covid-19 lockdowns and education have on the motivations to engage in OAE. Furthermore, study has proven that there is a need for further research into the motives to pursue OAE higher education. Finally, the results have shown that the concept of "fun" was an integral part to participation in OAE and recognition of this is necessary for further research into the importance of OAE participation.

5. The impacts of Eco-tourism in Antarctica.

This research project explores the impacts of Eco-tourism in Antarctica. My aim was to look at current protection and through my research conclude whether or not the current model was working or needed to be re-formed.

This was approached by setting 5 objectives to help reach the set goal. The first objective was to identify what Eco-tourism was and understand who it applied to. The second objective was to continue with the literature to identify why tourism was increasing and exploring current studies on what risk factors they had found related to tourism. The third objective was to collect primary data from a set control group, this would enable the collection of opinionated responses from people who work within the area. This was done by using a Questionnaire due to restrictions and timing of the project and by following the universities code of ethics. The fourth objective saw using both sets of primary and secondary data collected to identify themes and contrasts, this helped to critically analyse them to make judgments on the findings. The fifth objective was to use the data collected to make informed suggestions on how to go forward in relation tourism in Antarctica with reflection on the previous literature and new data collected.

The literature review opens many areas for discussion, exploring the history and background of tourism in Antarctica, what Eco-tourism is and who it applies to, the current increase in tourist numbers and the behaviour of this data. It also explores IAATOS guidelines and in particular the Antarctic Ambassador Programme. The results from the questionnaire found similar responses from most participants regardless of their background. There was a clear concern for the future of Antarctica which didn't seem to be impacted by the relationship the individuals had with Antarctica. When comparing the data from the questionnaires to the literature studied three main areas came up. They were: Transport and getting to Antarctica, Landing Sites, Ambassador Programme.

The main theme of topic throughout these was climate change and also fossil fuels and fuel in general. The discussion takes a critical look at how IAATO manage the current tourisms and tries to identify why with their monitoring numbers have been able to increase so dramatically.

The project comes up with six suggestions which could help control the increase in tourism for future. They include:

1. Capping tourist numbers with a review after a set time.
2. Fewer landing sites which would work on a rotation system, giving areas the chance to recover before being visited again.
3. Visitor passports, introducing a system where the once in a life time trip stays as once in a lifetime. Opening up future trips to newcomers and people who want to re-visit can do so in a productive/working capacity.
4. Create an official level regulator out of the existing IAATO. The new regulator will have the ability to monitor and fine, this would be a compulsory system which all tour operators would have to sign up to. Not voluntary like the current system.
5. Improve the Ambassador Programme to be more inclusive to people from all walks of life, create a scholarship programme paid for by other tourists.

6. Develop the Ambassador Programme to be multi-cultural and provide education to countries which don't have access to IAATOS current media presence due to language and other barriers.

Overall this project had took a wide approach to the subject and uncovered many different avenues, to further the research it would need to narrow down its subject areas to get to grips the entirety of what's going on. A longer period of study into the behaviours of eco-tourism and its changing demographic would give us a better understanding of why people want to visit Antarctica even though they are aware of the damage just getting there alone causes.

6. The benefits of participating in physical activity in a natural green environment for both mental and physical health.

The systematic review firstly was an introduction of the benefits that the outdoor green environment has on individuals mental and physical health, it was an overview of the benefits it has for individuals, especially those with mental health conditions, it showed benefits such as improved anxiety, stress and depression symptoms, as well as benefits to physical fitness such as decreased risks of serious health diseases such as cardiovascular disease, diabetes and cancers. The main reason for the study was to find out the benefits of participating in physical activity in a natural green environment for both your mental and physical health and furthermore whether exercise in a natural green environment shows more benefits to your mental and physical health compared to exercise in an indoor environment. The second aim was to find out whether the coronavirus pandemic has caused mental health issues around the world to increase drastically and whether being allowed to take part in exercise in a natural outdoor environment has allowed them to cope with their mental health conditions or has showed improvement. Two electronic databases were searched in order to assess the impact of exercising in an outdoor environment has had on both an individuals health and mental health and furthermore whether exercise in an outdoor environment shows more benefits compared to an indoor environment. A few studies on the impact of the coronavirus pandemic on mental and physical health were also included. The databases used for the wide spread search were UWTSD Library and ProQuest, these two were searched for research articles, both of the databases found a total of 2,990 studies. The results that were found had to be dated back in the past 5 years and had to include a full text version of the articles. An exclusion and inclusion criteria was then used in order to narrow down the 2,990 studies into a more relevant amount of studies. After applying the exclusion and inclusion criteria and reading through each of the titles to find relevant studies a total of 35 studies were found. The 35 studies were then searched more in depth by reading each of the articles abstracts to find further relevance, which left a total of 31 studies. The 31 studies were then screened for full text search, which left a total of 7 studies for the systematic review after excluding 24. The data that was researched and reviewed throughout the systematic review showed a clear view that exercise in a natural environment has many benefits for both an individuals mental and physical health. The review also showed that exercise in a natural environment compared to an indoor environment showed significantly higher amounts of benefits to an individuals mental and physical health. Moreover the data also showed that individuals experienced higher amounts of mental health problems during the coronavirus pandemic and less physical activity levels, however those individuals that exercised outdoors during the pandemic showed lower symptoms of mental health and were able to cope with the symptoms better

7. The effect of zinc on inflammatory acne vulgaris: a narrative review of the literature.

Background/Introduction: Acne vulgaris is a chronic inflammatory disorder effecting the pilosebaceous units of the skin causing excess sebum, open and closed comedones with inflammatory lesions (Williams et al., 2012). Acne effects 20% of adolescents with 64% of adults continuing to present with symptoms. Individuals are often affected beyond skin clarity where suicidal thoughts are common in those with severe acne (Bhate and Williams, 2013). Treatment options are varied with associated negative side effects and often contraindicated with other conditions (Williams et al., 2012). For example, skin irritation from topical benzoyl peroxide and retinol use during pregnancy. Oral zinc to treat acne has been explored previously suggesting zinc is an effective acne treatment (Sardana., 2014). Understanding the precise action of zinc within the body and acne formation processes may be relevant where zinc, as an anti-inflammatory agent, could reduce acne symptoms (Mogaddam et al., 2014). However, progression of zinc to clinical application/ settings is not evident and reasons for this are unclear. Limitations of previous studies may have inhibited the use of zinc clinically where quality of evidence may be insufficient to inform practice.

Method: To provide a case for assessment of zinc levels and zinc supplementation in acne treatment, a narrative review of information was conducted using a qualitative, unsystematic research paradigm. The links between zinc, inflammation and acne were explored to inform understanding, future research and clinical practice.

Results/Key findings: Zinc has the potential to elicit anti-inflammatory effects and in turn reduce acne symptoms. The precise dosage of zinc required to reduce acne remains unknown due to limited research in this area. Similarly, evidence for assessment of serum zinc levels was insufficient.

Discussion: Serum zinc levels could be associated with acne when limited research on this is combined with evidence supporting the idea that inflammation consumes zinc at a cellular level (Mogaddam et al., 2014). Anti-inflammatory effects noted for zinc may be dose dependant for inflammatory conditions such as acne and genetic background and disease status may vary the effect of zinc on inflammatory markers. However, 15mg of Zinc gluconate (taken twice daily) as a prescribed treatment for acne is recognised by Dreno and Boulin (2008), perhaps indicating the need for further quality research into zinc gluconate and acne within the United Kingdom. The effective, safe use of zinc gluconate is recognised by WHO (2013) and use of effervescent zinc gluconate could assist absorption and reduce gastrointestinal effects. It would be advisable to conduct large-scale double-blind placebo trials to inform practice. Incorporating assessment of serum zinc levels could partner trials to support or refute future research in this area. Avoiding replication of previous study limitations seems essential for progression of supplemental zinc to a recognised acne treatment.

8. Pre-service primary school teachers' perceptions of physical education.

The aim of this study was to find out pre-service primary school teachers' perceptions on physical education. Initial teacher education plays an important role in preparing confident and passionate teachers. However, the learning needs of pre-service teachers are influenced by their background especially in relation to physical education. (Herbert and Hobbs, 2017). The intent of this qualitative research project was the view the perceptions that pre-service primary school teachers have on physical education. The study had 8 participants all from South Wales who were undergoing a PGCE or QTS qualification at the time the research was conducted. The students were gathered through opportunity sampling via social media. This is gathering the participants "from target population available at the time and willing to take part". (McLeod, 2020). Those who were interested were then invited to participate in the research via email. Before any research was conducted, they were sent an information sheet with relevant information about the study on. Once they agreed to participate, they were sent a consent form that was read and signed before the research began. Deciding to participate in the research was completely voluntarily, and the participants didn't have to answer any questions they didn't feel comfortable answering. The question the participants were asked was "what is physical education?" The question was a blind question as the participants did not see the question until they were ready to answer it. The participants had a maximum of 10 minutes to write down their thoughts and opinions on what they think physical education is. There was no assistance from anyone about their answers, which allows the participants to answer honestly. The data from the participants were analysed using thematic analysis. It was decided that thematic analysis would be used as "It is a method for identifying, analysing, organizing, describing, and reporting themes found within a data set" (Braun and Clarke, 2006). This is the most suitable way to analysis the data as a frequency word count was conducted on the participants answers find common words and then themes. Thematic analysis was used as it "can produce trustworthy and insightful findings" ([Braun and Clarke, 2006](#)). The answers from the 8 participants consisted of 1327 words. The most a participant wrote was 368 words and the least someone wrote was 64 words, the results were. From the research, four key themes were established. These were, skills, health, sport and physical activity. The term skills were used to categorise physical skills such as catching and throwing, and social skills such as communication. Health was a reoccurring theme throughout the study, and further analysis of the data demonstrated the correlation between health and well-being. This may have been due to the change of curriculum in Wales which has changed the focus from subjects to areas of learning, one of them areas being health and wellbeing. Sport was another reoccurring theme throughout the participants answers. Sport has always dominated the PE curriculum (Kirk, 2010) and it is clear from the research that it still does to a large extent. The final theme was physical activity. Further analysis into this area shows a connection between leading a healthy life and being physically active.

9. Primary School Teachers beliefs, attitudes, and confidence in teaching physical education.

'The primary phase of a child's life represents a period of steady growth and development and places those in their care in an excellent position to help them in their physical skill acquisition and development' (Pickup and Price, 2007). This study investigates Primary School Teachers beliefs, attitudes, and confidence in teaching physical education. There were three main aims which I wanted to achieve within my study. These were:

1. To identify if there is a need for qualified PE specialists to teach Physical Education in primary schools to provide high quality lessons.
2. To understand if Primary Education teachers have confidence in taking a Physical Education lesson.
3. To determine if teachers' beliefs and attitudes have positive or negative aspects about teaching PE in primary schools.

"With the current trend of focus primarily given to core subjects (Maths, English, and Science) in primary education" (Carney and Winkler, 2008), the effect this is having on foundation subjects such as physical education is seen as damaging. Therefore, a bigger insight was needed for primary school teachers' beliefs, attitudes, and confidence in this subject to provide a deeper understanding. 26 teachers took part in a writing task where they had 10 minutes to write as much as they could on their beliefs, attitudes, and confidence in teaching PE. A qualitative methodology was used. In a qualitative method 'you look for variety in people to describe, explore or explain phenomena in real-world contexts. Influence from the researcher on the context is inevitable. However, by striving to minimize your interfering with people's natural settings, you can get a 'behind the scenes' picture of how people feel or what other forces are at work, which may not be discovered in a quantitative investigation' (Korstjens, 2017). Data was analysed using thematic Analysis (Braun and Clarke, 2006) which allowed for the creation of broad themes to capture teachers understanding of physical education. The main themes that were found and which I researched more in depth were skill development, inclusion, health and wellbeing, knowledge, experience and confidence and Curriculum and school staff. Having these themes made the process more straightforward and smoother as it made my text coherent and easy to follow. It also made it easier for me to organise the text and find similarities and comparisons that were discussed between each of the writing tasks and highlight any areas of concern found in the participants answers. Key findings indicated that most teachers' perceptions of teaching physical education in primary school are down to their beliefs and enjoyment in physical activity. Furthermore, results revealed that the majority of participants believe that physical education helps enhance physical activity participation for life and helps to develop a variety of different life skills. Contrary to research, participants explained that the new curriculum for Wales 2022 is going to have an impact on physical education lessons. More research is needed into physical education training at higher education and how quality can be improved.

10. Can a Dietary and Nonpharmacological Supplementation Intervention Improve Symptoms of Neurodevelopmental Disorders: A Narrative Literature Review.

Background: Over 20% of school children living in Wales are diagnosed with additional learning needs (Welsh Government, 2018). Despite increased diagnosis and improved provision, the challenging behavioural aspects of neurodevelopmental disorders (NDDs) are resulting in children being removed from the traditional school setting and prescribed medication that may have lasting effects on both physical and mental development (Mugno et al., 2007; Timpson, 2019). A growing body of experts have highlighted the multifactorial aetiology of NDDs, citing poverty, maternal health, diet and supplementation as areas of focus for further research and policy intervention (Adolphus et al., 2016; Marmot 2020; Garcia-Casal et al., 2018; Kumperscak et al., 2020).

Methodology: A body of literature with emphasis on aspects of child poverty, maternal health, diet, supplementation, physical activity and sleep, specifically relating to NDDs, was compiled. This information was structured in such a way as to follow the life course of patients with NDDs, analysing overlapping research results and recommendations for future diet and supplementation interventions. It was considered imperative that the research took into account all aspects of NDD aetiology, rather than diet and supplementation exclusively, in order to evaluate best practice treatment recommendations.

Discussion: Findings highlighted the interconnected nature of NDD symptomatology. The review exposes the disparity in NDD prevalence in line with the health inequalities highlighted by landmark reviews (Marmot, 2010; Timpson, 2019). In order to ascertain the relevance of diet and supplementation interventions as alternatives to traditional pharmaceutical mediations such as Methylphenidate, the life course of NDDs should be considered (Krinzinger et al., 2019; Garcia-Casal et al., 2018; Marsh et al., 2019). In this regard effective interventions have holistic strategies and outcomes (Matejic, 2020; Sanchez et al., 2018; Johnson et al., 2016; Bruins et al., 2018; Marsh et al., 2019; Garcia-Casal et al., 2018; Nyaradi et al., 2013).

Conclusion: Clear evidence has been provided highlighting the importance of long-term commitment to interventions relating to NDDs; from provision to tackle inequality and poor maternal health to encouraging new developments in pre- and probiotic research (Welsh Government, 2019; Santocchi et al., 2020). Perhaps most significant to this review is the evidence in support of free school meal provision (FSM) for the most vulnerable in society (Chambers, 2020). Additionally, research in support of universal free school meals (UFSM) roll-out, at both breakfast and lunchtime (Child Poverty Action Group, 2020a), is highlighted as having significant immediate bearing on behavioural and NDD aetiology and provides a long-term strategy to mitigate some of the socioeconomic inequality that exists across the UK (Magic Breakfast, 2019; Lambie-Mumford and Sims, 2018; Gaal et al., 2018; The Food Foundation, 2020; Feinmann, 2020).

11. Psychological and physical techniques that outdoor instructors use to promote a positive environmental perspective of outdoor recreation participants.

Considering the environmental crisis that faces us in the 21 century, we must be looking into ways to lower our carbon footprint where ever possible. Exposure to nature has been shown to positively shift environmental perspective, however, when an individual is uneducated in terms of environmental impact, individuals may have a positive attitude towards the environment, but not portray this through their behaviour. Considering that adventure scholars consider it a duty of the outdoor instructor to provide environmental education, the instructor has a great opportunity to influence participants environmental perspective. This study aims to maximise the potential for outdoor instructors to promote environmentally responsible behaviour. This study evaluates the psychological and physical techniques that outdoor instructors use to promote a positive environmental perspective of outdoor recreation participants.

In order to understand the personal practise of individual outdoor instructors, it was necessary for this study to conduct qualitative research. The aim of this research was to compare the theory of what outdoor instructors can do to develop and promote environmental education in outdoor recreation with instructor's realistic daily practise. To discover this, the three outdoor professionals were interviewed over Microsoft teams using a semi structured interview style. The results of the interviewed were analysed through the use of thematic analysis.

The results of this study showed a correlation of outdoor instructors having a positive relationship to nature, but not harbouring the necessary knowledge in order to effectively engage in debate/conversation regarding a variety of environmental topics. The study noticed difficulty in the promotion of environmental education in fast-paced sessions. In saying this, slow-paced outdoor activities seem to lack a sense of priority in the promotion of environmental education despite their being greater opportunity to do so. This lack of knowledge also aligned with outdoor instructors lacking confidence to engage in conversation with participants and miss opportunities to engage individuals in thought provoking conversation. Considering that the development of the instructor's personal environmental education would take significant time to develop, this study noted certain techniques that can be readily used to increase the likelihood of positively shifting participants environmental perspective. The instructors of this study all seemed to lack a structured debrief where participants are urged to reflect on their experience of the session along with their home life. Research showed that engaging participants in reflection has a great opportunity to allow them to analyse their environmental perspective.

This study showed the need and opportunity to develop an environmental education course that is offered to outdoor instructors. This course would allow outdoor instructors to develop their ability to promote sustainable solutions to individual's environmental footprint. As well as this, this course has the opportunity to develop instructor's confidence in taking opportunities to promote environmentally responsible behaviour and potentially lead to increasing the number of environmentally responsible people.

12. Primary school teachers' perceptions and understandings of Physical Literacy and how this applies in a Physical Education environment.

Recently, physical literacy (PL) has been recognised as an important concept that should be supported as part of children's development, specifically through physical education (PE). This comes as PE lessons have been identified as the most common environment for the development of physical literacy. The purpose of this study is to explore primary school teachers' perceptions of physical literacy, but to also gain an understanding of their general thoughts towards PE in primary schools. The concept of physical Literacy has been adopted by many scholars and practitioners as a new approach to PE, therefore suggesting the importance in gaining an understanding of what teachers perceive PL to be – as this could be a new method of teaching. To do this, a selection of 7-8 primary school teachers were chosen from a school in South Wales. The participants, from the same school, had various years of teaching experience, of both male and female gender and spanned a range of year groups. Interviews were conducted on a 1-to-1 basis and included a series of questions which involved topics such as opinions on physical education, their personal understanding of physical literacy, and the impact the COVID-19 pandemic has had on both physical activity levels and physical literacy development. Due to COVID-19 restrictions prohibiting face-to-face contact, the interviews took place over a 'Microsoft Teams' call. Audio from the interviews were recorded using an audio recorder, with the participants consent, and later verbatim transcribed on a private laptop to ensure data was secure. Using a thematic and comparative approach to analysing data, results were organised into themes and documented to be discussed in more depth. The data presented five main themes throughout, three of which included; teacher understanding of physical literacy, beliefs and opinions of PE in the school timetable, and assumptions of how the COVID-19 pandemic has affected young children's development of physical literacy. As discussed in the paper, many participants unknowingly had the same views and opinions as other teachers in the sample. When speaking of PE within the school, barriers such as the lack of time in the school timetable were highlighted, as well as a lack of equipment and a lack of space which couldn't allow for effective and quality PE lessons. However, the primary school teachers had varying understandings of physical literacy, some admitted that they were not familiar with the term, and others misunderstood it for fundamental motor skills by describing skills such as throwing and catching, and the children's ability to perform these. Previous studies conducted in this area of research found similar outcomes to this project. The teachers lacked the knowledge and understanding of the term 'physical literacy' to be able to create appropriate opportunities to support pupil development. Once asked of their perceptions of physical literacy, the teachers were given the International Physical Literacy Association (IPLA) definition, many teachers later used language in association with this definition when answering future questions.

13. The Role of Gut Bacteria within the Digestive System and how Normal Gut Microbiota is affected by Irritable Bowel Syndrome and Irritable Bowel Disease.

The overall functioning of the gastrointestinal tract has a huge influence on human health (Jandhyala et al., 2015). The gastrointestinal tracts main functions are to filter out wasted nutrients following the digestion, ingestion and absorption of nutrients that are essential for the maintenance of health within the body (Hornbuckle, Simpson and Tennant, 2008). The gastrointestinal tract is home to a large variety of microorganisms known as the microbiota (Sekirov, Russell, Antunes and Finlay, 2010). Each microbiota profile consists of around 100 trillion microorganisms which are unique to each individual (Davis, 2016). Each microbiota profile is made up of bacteria, archaea, viruses, fungi and protozoa (Davis, 2016), and two major phyla called Bacteroides and firmicutes (Jandhyala et al., 2015). The role of gut microbiota in human health has raised a significant interest within healthcare (Jandhyala et al., 2015). Each individuals' microbiota within the gastrointestinal tract is unique due to several components which include genetics, family background, order and phyla (Rinninella et al., 2019). The profiling of gastrointestinal microbiota is formed during early stages of life and is strongly influenced by gestational delivery date, type of delivery (caesarean section or vaginal birth), the type of milk that is being used and during the weaning process (Rinniella et al., 2019). By around the ages of 2 and a half years old the diversity of the gastrointestinal microbiota is fully formed appearing the same as that of an adult's microbiota profile (Rinniella et al., 2019). Microbiota profiles can also be altered as a result of illness, poor nutrition, lifestyle, age and mental wellbeing which can cause potential complications within the gastrointestinal tract. The complications may include, irritable bowel syndrome, irritable bowel disease, obesity and cancer (Zhang et al., 2015). A study by Lo Presti et al. (2019) found that there was a significant difference between the biodiversity of microbiota in healthy faecal and mucosal samples in comparison to the samples from people who had irritable bowel syndrome and irritable bowel disease. Studies by Fairbrass, Costantino, Gracie and Ford (2020) suggested that it was highly reported that there is a crossover of symptoms of irritable bowel syndrome in patients with irritable bowel disease, more commonly those who had Chron's disease. Studies within this review researched the effects of a Low-FODMAP diet compared to a normal diet. The studies were carried out by Grammatikopoulou et al. (2020) and Pedersen et al. (2017) who also compared the findings through the sampling of faecal microbiota both before and after the studies. Both studies suggested that there were no alterations to the gut microbiota following the Low-FODMAP diet. However, both studies did find that there was an improvement in the quality of life in both irritable bowel syndrome patients and irritable bowel disease patients. Both studies suggested that there were concerns in relation to how little the Low-FODMAP diet has been trialled and in relation to the timescale of the diet plan as most studies were only 4-8 weeks long. Therefore, more studies need to be carried out and for longer time periods in order to confirm whether the Low-FODMAP diet can make a significant long-term difference to the quality of life of those with irritable bowel syndrome or irritable bowel disease (Sloan et al., 2018). This systematic review identified how changes to gastrointestinal microbiota can result in a diagnosis of irritable bowel syndrome, or Irritable Bowel Disease and how microbiota can be altered through diet.

14. An overview of path management strategies that are being used to tackle the impacts caused by increasing visitor numbers on paths and trails.

This literature-based dissertation looks at different management strategies to tackle the increase of visitor numbers to paths in the outdoors. Paths and trails are an important aspect in promoting health and wellbeing, they provide people with opportunities for outdoor recreation such as walking, cycling and horse riding. Management strategies were analysed from primarily national parks, as well as protected areas and woodland areas outside of national parks. Without path management strategies the natural landscape can be susceptible to erosion and trampling, and in extreme cases can cause large scarring of the landscape. Scarring of the landscape is not only visually intrusive, but can damage precious eco-systems and disturb wildlife. Other impacts on paths that have been discussed within the dissertation include trampling of vegetation, disturbance to wildlife caused by noise and dogs, as well as accessibility issues around inclusion for people with disabilities. Funding for path maintenance was also looked into as maintenance cannot be carried out without funding, and due to paths being in remote areas, requiring stone and heavy machinery, path maintenance is very costly, sometimes costing up to £180 per meter. Surveys are an important part of path maintenance as these can determine the type of path user, what type of maintenance is required and appropriate visitor management strategies. The reason for conducting a literature-based dissertation over a qualitative study was that the purpose was to look at path management strategies, rather than path management opinions. The analysed literature had a heavy emphasis on national park management strategies rather than journals and books. Academic journals such as Journal of Environmental Management were used to build an overall picture of different types of path management, however, national park management strategies provide an accurate description of the path maintenance each national park uses and is currently carrying out. Occurring themes found from the literature which were discussed were visitor management, funding, surveys, access for all abilities, path maintenance, National Standards/ Good Practice Guides and visual impacts.

Path management strategies were taken from national parks within the United Kingdom such as Snowdonia, Lake district and Peak District, as well as New Zealand, America and Nordic countries to see if strategies were different to the United Kingdom. What the report found was that path management strategies were mostly similar in regard to path maintenance techniques, however, with visitor management Nordic values were different to the UK as they preferred 'soft' management methods such as guidance and education rather than 'hard' management methods such as fencing and entry fees. However, due to a dramatic increase in visitors, Nordic countries are now favouring 'hard' management methods to minimise negative impacts to the environments and wildlife.

It was found that it is important for path management to find the balance between protecting the landscape from scarring and wildlife disturbance whilst also maintaining visitor experience. If signage and fencing is overused this may spoil the outdoor experience that visitors wish to seek. However, if there are no management strategies put in place then this can cause damage to the landscape which will also have negative impacts on visitor experience.

15. Research to determine the prevalence of the use of food banks and to determine why they are being used in increased numbers in both impoverished and affluent areas.

The purpose of this research is to determine the prevalence of the use of food banks and to determine why they are being used in increased numbers in both impoverished and affluent areas. Research will be carried out in the form of a narrative literature review to determine the trends following increased usage in recent years. Food bank use is a current issue in the UK and services are currently overwhelmed seeing various population groups using them in their masses. Food banks are representative of inequality and poverty in countries where this should not be a growing issue. They are often based in affluent areas but still see a large amount of service users leading to questions as to why and how this is such a current and vast issue in 2021.

The aim of this study is to explore the reasoning behind the unprecedented number of referrals to food banks in recent years. Current literature has been critically reviewed to understand the characteristics of the population groups using food banks. The link between their demographics and the likelihood of reliance upon them has also been explored. Health inequalities between rural and urban areas have been examined to see which population group is more likely to use foodbanks. Rural areas can often face less opportunity and lack of access to health care amenities, so this has been explored and researched to see current trends. A narrative literature review has been carried out to determine how food bank usage could be reduced giving the supporting evidence and what needs to be changed to accommodate this. A timeline of poverty within the United Kingdom has been created to establish the trends of poverty under different government parties. The main objectives of the narrative literature review were to address current peer reviewed literature in a reflective and critical manner. Key findings relating to the proposed area of discussion were analysed with a critiqued approach.

There is evident reasoning for increased food bank usage in the UK, particularly during 2020/2021 due to the coronavirus pandemic. A Pembrokeshire foodbank, Patch charity has announced their yearly figures to highlight deprivation in the county. In January 2020 food was given to 277 people, pre pandemic. In January 2021 food parcels were provided to 618 people, during a current lockdown, almost one year into the pandemic. On the surface it could be assumed that Pembrokeshire is generally an affluent, although rural area (Patch, 2021). This data shows that poverty is not confined to impoverished areas and change needs to be implemented. This is a national issue and the United Kingdom will be looked at comparing a variety of settings affluent to impoverished.

Lack of income and job security were contributing factors leading to food bank referrals. The proposed research has explored the inequalities individuals face and the government contingency plans and policies in place to overcome them. There have been numerous reports into the newly unveiled Universal Credit system leading to further poverty. This narrative approach has critically evaluated the system. The world is witnessing the full effects of furlough and the Coronavirus Pandemic, so it is an opportune time to identify the inequalities in health and nutrition that have arisen including unequal access to nutritious food due to affordability and demographics, unaffordable housing, homelessness, and further issues that were unveiled following a narrative literature review.

16. A quantitative research study to examine if taking risks when playing outdoors influence children's physical development.

Play provides a non-threatening context for children to learn about their world and gain skills necessary for adult life (Bjorklund, 1997; Bruner, 1972). Therefore, the intent of this quantitative research study was to examine if taking risks when playing outdoors influence children's physical development. An online survey was conducted to professionals aged 18 and over in The Foundation Phase curriculum from student teachers to headteachers across a period of two weeks. After a comprehensive and extensive analysis of the survey results when four themes emerged: 1) Gender of educational professionals and promoting risk, 2) Age differences in educational professionals and fears of complaints, 3) Position in the school and perceptions of risk in different environments, and 4) Type of physical developments and concerns of outdoor play. In general, the findings indicated that outdoor risky play has a positive influence on children's physical developments although some educational professionals are still hesitant on introducing more risks and risk play into the classrooms of children 3-7 years old. Future research direction for this project could be to investigate the effects of the children taking risks outdoors sociologically. The sociological process of them taking risks and how that effects their physical development and decision-making skills.

17. A quantitative study to investigate parent's views of Covid-19 lockdown and the effects it has had on their child's social development.
A review to assess the effects of Static and Dynamic stretching

A quantitative study was conducted to investigate the research topic which is parent's views of Covid-19 lockdown and the effects it has had on their child's social development; 20 questions were asked in the survey, which aimed towards parents that had children between the ages of 6 and 12. The practical problem was the lack of responses in the survey meaning there was not a variety of target audiences that could have made the answer to the research topic completely different. Evidence was shown on the effects of a child socially but not so much on the effects of a child developmentally. The theoretical problem was covid-19 was a new disease which was new to everyone across the world so there was not a lot of research to support the research topic. However, as time went on and surveys were conducted more information was developed. The aims that needed to be investigated were what were parent's views on lockdown and the effects it has had on their child's social development. To gain an understanding of what the child was like before and during lockdown and see if it had a positive or negative affect on them and to briefly look into how an only child and a child with siblings was affected during lockdown. Due to Covid-19 the biggest impacts that has happened to children is not being able to spend time with friends, not being able to visit family members and schools closing (John, 2021). From the individual's perspective in the survey the biggest impacts that has happened to children is not being able to see friends and family, not being able to go anywhere and not being able to do sports. The idea that children are lonely, self-centred, domineering and disadvantaged compared to children with siblings is slowly being viewed as what is truly is, a myth (Rosen, 2021). However, from the survey 83% of parents believe having a sibling made an impact on how their children coped. Children can unconsciously show some regression in their behaviour as a coping skill, returning to a developmental stage where they feel safer, adolescents may feel introverted and unhappy as they are somehow separated from their friends and spend more time with the family at home (Bayar and Zontur, 2020). There is not a lot of evidence to show how their child's behaviour was different before and during lockdown, however, one parent did state that their child became very dependant on them including sharing their bed most nights for comfort. If the survey was to be made again there will be another question added, asking how their behaviour changed during lockdown. Unfortunately, the research doesn't show how the children were prior to the pandemic, which limited the data needed in order to answer if the children's development increased or decreased throughout the time alone at home. In conclusion, the following research conducted showed that, due to the current covid restrictions a child's social skills were below the expected level. This was typically due to a restriction on the opportunities given to be social and around other members of society.

18. A review to assess the effects of Static and Dynamic stretching on Speed, Power and Strength.

The purpose of this review is to assess the effects of Static and Dynamic stretching on Speed, Power and Strength. The effects of stretching on Speed, Power and Strength is debated (Shrier,2004). There are many stretching techniques out there that are used in training programmes and warm-ups such as dynamic stretching and static stretching. A common warm-up includes aerobic activity such as a light jog lasting for 5-10 minutes (Jeffreys,2007). This enables a positive effect on the body as it increases body core temperature and benefits neuromuscular function and increases the elasticity in relation to muscle fibres improving force production and has a positive effect on speed, strength, and power (Young and Begm,2002). Traditional warm-ups include Static Stretching (SS) and has been popular, SS stretching is thought to increase range of motion and enhances flexibility which results into decreased stiffness and enhanced tolerance to stretching (Behm & Chaouachi,2011). SS is done by stretching the muscle, lengthening it, at a slow pace to mild discomfort. SS means that there is no full range of movement available and is held at a constant angle. (Trombley,2010). It is recommended that a SS induced protocol is advised to be held for at least 15-30 seconds (s) (Ogura, Miyahara, Naito, Katamoto, & Aoki, 2007). A warm-up that includes dynamic stretching (DS) can also be called a active warm-up, Dynamic warm-up includes dynamic movement and enhances core temperature, muscle temperature, cardiovascular and metabolic alterations than SS (Bishop,2003). DS is a movement that is performed in a controlled manner through a active range of motion across the joints (Fletcher and Jones,2004). DS is self-assisted and starts from a neutral position into a slow movement to maximum range then a hold then back to the start position eccentrically for at least 4-5 seconds (Caruana,2020). The method for search was done with online databases such as ProQuest and SportDiscus to gather articles for the review. Key words were used such as: Dynamic, Static, Stretching, Effects, Influence, Protocol, Strength, Power, Speed and Performance and all studies were published in 2017-2021. An inclusion criterion and an exclusion criterion were followed. The inclusion criteria involved (1) Articles were selected or excluded depending on the relevance of the title and abstract after reading the full text, (2) Articles must only be Dynamic and Static alone, (3) Articles must be published within a 5-year frame (2016-2021), (4) Must include a general-warm up protocol and (5) Articles must include prior and after results effects of SS and DS. A flow chart was used to show the data collection process. Overall, 5 studies were selected from Pro Quest, and 3 sports discuss showing the effects of SS and DS on speed, strength, and power. SS had a negative effect and DS enhanced sprint performance, but other studies SS presented no effects. DS enhanced power and SS had a negative impact, but one study showed SS had a better effect. 2 studies showed that SS and DS did not alter strength, but one study showed DS improved muscular strength and SS decreases it.

Key Words: Stretching, Dynamic, Static, Strength, Speed and Power.

19. How does the leader/member relationship affect group members and their performance? Perceptions from experienced leaders.

The purpose of this paper is to highlight the potential effects that the relationship between a leader and their group members can have on the group and its performance, with the specific outlook of the effects within an outdoor adventure setting. The study within this paper is conducted with the hypothesis that a positive relationship between the leader and group members will benefit the group and enable improved group performance. One of the main objectives of this paper is to determine key factors that allow a positive relationship between the leader and group members to develop and to determine the importance of these factors. Another of the objectives is to assess the relevance of the Leader Member Exchange Theory (Dansereau et al. 1975) within relationships in an outdoor adventure setting. The theory is highly informative and appropriate when understanding the effects of leader/ group member relationships on groups, however, there is limited research evidencing the theory within practice in the outdoor adventure industry. The reviewed literature focuses mainly on the Leader Member Exchange (LMX) Theory and important and relevant updates it has had since its inception in 1975. There is also a focus on previous studies conducted that evidence some factors that lead to or aid a positive relationship between the leader and group members developing. The study will be conducted as a series of semi-structured online interviews with three experienced outdoor leaders. Semi-structured interviews were selected as the most appropriate method of gathering the desired information, able to provide answers to the study question due to the ability to probe the participants. Probing allows the researcher to gain more information from a participant by asking them to expand, or by picking up on points that the participant makes that the interviewer had not previously identified (Guest et al. 2013). Results show that LMX theory is highly evidenced within the outdoor adventure setting, with results also showing the benefits of positive high quality LMX and also the limitations and disadvantages of low quality negative LMX. The study also highlights some of the factors that can be viewed as important for building positive leader/ group member relationships. These factors include the ability to build trust, empathy, clear communication and the leaders adaptability/ flexibility. The results not only show the importance of positive high quality LMX but also link these exchanges to other theories. Notable theories evidenced within the papers results include Conditional Outdoor Leadership Theory (Priest and Gass. 1997) and Self Determination Theory (Deci and Ryan. 2008). The study is quite small scale, due to time constraints the participant pool is very limited at only three participants, this means that any results can only be used as a snapshot and not as concrete evidence for every relationship between leaders and group members within an outdoor adventure setting. Despite this, the study does provide results evidencing the applicability of the LMX theory in leader/ group member relationships within the outdoor adventure setting, as well as successfully identifying some of the factors that enable positive relationships to occur.

20. What factors affect parents' risk averse perceptions and subsequent inhibition of their children's unsupervised play? A review.

'Three-Quarters of UK children spend less time outside than prison inmates' (Carrington, 2016). This dissertation explores factors affecting parent's risk averse attitudes towards unsupervised outdoor play for children between the ages of 7 and 13. These factors were grouped together into categories: Parental fears, Lifestyle and Technology.

The study aims to explore these influencing factors and the consequential behaviours that limit children's unsupervised play outdoors. The objectives were to collate a range of pre-existing research that investigates possible reasons for changes in perception and then to critically analyse the research for common themes. The purpose of this analysis was to provide understanding and clarification on this topic to enable possible avenues for change and further research.

A narrative review methodology was used to conduct the collection of research for the literature review. The use of key words allowed a large range of data to be surveyed for relevance. However, this method can be subject to bias in its choice and inclusion of articles and how these articles are perceived (Runrill and Fitzgerald, 2001). To help combat this subjectiveness an inclusion and exclusion criteria were put in place. Articles that were published before 2000, those about adults in the outdoors, studies on supervised outdoor play, articles not including the key words and those not written in English were all excluded. The articles remaining after this process were relevant, academic, and recent.

From the research, the identified factors were split into the three key groups stated above. These were further subdivided for greater analysis. The parental fears section was subdivided to explore: increased traffic, kidnapping and violence, and persecution. These three subchapters identify the changes in contemporary society that have led to the perceived increase of dangers that increase anxiety for parents who might otherwise encourage their children to play outside unsupervised. Lifestyle changes, such as employment expectations affecting working parents as well as home and route locations have also had an impact. These can limit the availability and proximity of the parents to the children, thus limiting the range and time allowed for this type of activity. Thirdly, technology has had a dramatic impact, both negative and positive, on children's freedom for unsupervised play outdoors. This third section was divided to include media, gaming consoles, smartphones and future technology. Media and gaming consoles were seen to have a negative impact on parental risk averse perspectives as they can encourage the view that the world is a dangerous place. However, smartphones and future technology have a more positive impact on parental perspectives as they can facilitate parental supervision from distance and reduce anxiety through connectivity.

This research concludes that more safe spaces for children to play outside close to home are urgently needed in more urban areas. The study has also raised more questions that require further research into areas discovered but beyond the remit of this dissertation, such as health and the undoubted effects on parental perspectives and subsequent changes in behaviour regarding this subject in response to the Covid pandemic.

21. A Narrative Review of The Use and Importance of Resistance Exercise in Primary/Secondary School Physical Education.

The purpose of this narrative review was to indulge in the literature as to what resistance exercises (RE) are being used in our primary and secondary schools along with the importance and views placed upon the selected methods. The proposition toward this narrative review was aimed at allowing the reader to mature a greater understanding of what is being delivered within the primary and secondary school setting. What benefits is RE having on our youths, potential pit fall, barriers, and exposure to enable the next generation of youths to develop their motor and physical potential as they progress thorough both academic and professional life beyond their educational settings. The review aimed to open a broader knowledge of acceptance and its importance of the inclusion. To simply reflect the same passion shown to other academic based subjects. The objective of this narrative review is to oversee studies which have highlighted school aged children in both the primary and secondary school settings who have performed various methods of resistance exercises aimed at developing muscular fitness. These components include (muscular strength, speed, power, motor, and neuromuscular adaptations) to the methods selected in those studies.

The results identified a lack of Olympic style RE exercise methods used amongst the youths in the studies. However, when used amongst secondary school youths $P < 0.005$ in MF/CVF in middle aged schoolboys following 9wks UB/LB 10-rep max strength training. Plyometric in isolation or combination with bodyweight RE exercises primary school children was established in 70/80% of the studies selected at $P < 0.005$ difference in the outcome in improving their MF components. The results focused on participants aged 7.6 – 16 years old. The results also suggested with traditional style training methods i.e., free weights, Olympic lifts used sparingly or non-existent within primary school setting this highlighted a lack of confidence, knowledge, or inclusion of these methods of RE have in the primary and secondary school setting. The concluding thoughts and findings of this narrative review make valid suggestions as to how we as professionals can evolve the inclusion of RE within the school settings? Does more need to be invested in teacher training, education, employment of exercise professionals (S&C coaches) or more understanding of the developmental needs the children and adolescents should be exposed too to help reverse a decline in inactivity levels. This in turn could lead to healthier youths both physically and mentally whilst delivering a curriculum aimed at the positive, constructive outcomes RE/RT has on other aspects of health progressions like injury rehabilitation, reduction in occurrences, CV fitness and physical literacy.

22. The Effects of a Six-week Uphill Sprint Interval Training Programme on Sprint Performance and Technique in Sunday League Football Players.

Sprint performance is regarded as one of the most important factors of being a successful football player. There are numerous studies which attempt to identify the most effective method and efficient way to enhance sprint performance as well as alter an individual's sprinting technique to see a greater outcome. Therefore, the purpose the study was to determine whether a 6-week week uphill sprint interval training programme on Sunday league football players would improve their sprint performance and alter their sprinting technique. 18 amateur football players (age: 27 ± 9 years, height: 172.5 ± 7.5 m, weight: 85.3 ± 9.5 kg) were recruited from a local football team located in the South West Wales region. Due to the global pandemic, it was enforced that non-essential travel was prohibited which implied that the participants located an appropriate area to conduct the uphill sprint interval training. Participants were required to complete 2 session per week of 8 repetition of 10 second sprints followed by a 2-minute rest of walking down the hill. Pre and post-tests were conducted examined whether there was an improvement in time over 0 – 10, 10 – 20 and 20 – 30 m split distances in addition to a change in sprinting technique by observing the participant's stride length and step frequency. The results displayed that over the 0 – 10m there was an average improvement of 0.83% (-0.02s) but there was no significant difference ($p = 0.09$). Alternatively, there was an average improvement of 1.91% (-0.03s) in the 10 – 20m and 2.82% (-0.04) over the 20 – 30m distance as well as a significance of $p = \leq 0.01$. It was also suggested that uphill sprinting alters running technique and but unfortunately there was no significant difference in both stride length and step frequency ($p = > 0.05$). The studies examined after the results suggested that the improvements in sprint performance could be a result of an increase in muscle mass which led to an increase in maximum velocity to drive the body faster over the 0 – 30m distance. The findings suggest that uphill sprint interval training could be an effective and feasible method of improving sprint performance without using any specialist equipment due to the restrictions during the training and testing period. Sadly, in result of the restrictions around the global pandemic there are multiple limitations which emerged such as no contact with the participants and minimal validity and accuracy when setting up and conducting the pre and post-tests. In future research the physiology and biomechanics behind uphill sprint training should be explored to truly identify whether the improvements are linked to with improvements in sprint performance.

23. Female Participation Changes Throughout the Years in Sport and Physical Activity in Comprehensive Schools

In this paper there will be an investigation into research and findings on if the female participation numbers change throughout the years in sport/physical activity in comprehensive schools. Children should be preferably exercising everyday, whereas in school they normally only have games or P.E twice a week so that's only 2 hours out of 35 hours a week (Lwin and Malik, 2012). Studies suggest that female participation in competitive sports in schools "decreased over time" Eime, et al. (2016). From previous research it suggests that this topic needs looking into, that's why this paper will find its own data. I wanted to look into this topic as I loved sport in school but was almost put off by it because of lack of confidence and body issues, and I want to find out if females in schools feel the same way and ways of how to overcome it. The data that will be sound will come from participants from one school in Wales, that have given permission to do questionnaires and interviews if they have consent and want to do it. Resulting in the methods that are used are a mixed methods approach combining both quantitative and qualitative methods. There were 112 responses from the questionnaire and 4 interviews that were conducted (by the people who left an email to contact them if they wanted to do the interview). The results show that there is not much of a variety of sports/physical activities in lessons/clubs because they normally only do sports such as netball, football, rugby, rounders and swimming, obviously Covid-19 hasn't helped but even before covid they wanted more of a variety of sports/physical activities. They would like to try sports/physical activities they wouldn't normally try out of school e.g archery, yoga, etc, and have a choice in what they can do in lessons and clubs. Also there is a separation in lessons of sporty and non-sporty children, because the sporty children put more effort into the lessons, which the teacher then almost favours them and puts them all together. If they are not separated they think that they would want to join in more because the teams would have a mix of abilities and they can socialise with girls they don't normally talk to. Thirdly, the time of day has an impact because they are more tired in the afternoons, so the mornings would be ideal because they feel they would have more energy and would wake them up for the rest of the day. Lastly that confidence/anxiety/embarrassment affects their participation, self image issues, shyness etc, they can't really be helped, but the school needs to become more aware of this and try to be more sympathetic and understandable of their mental health. In conclusion, this topic is still an continuing topic and really needs to be looked into and something needs to be done about it, research suggests that it is a problem (Eime, et al. 2016), (Eime, et al., 2010), (Eime, et al.. 2013) and (Biddle. et al. 2005), and this paper's own research proves that something needs to be changed, in order to increase the participation of females in comprehensive schools.

24. A qualitative study of competitive state anxiety: Female rugby players.

There is limited research exploring female rugby players and their experience with anxiety. The majority of this research primarily focuses on male rugby players (Chase, 2006). Eight female participants who are rugby players of mixed ability with a minimum of 9 years rugby experience. Each participant was between the age of 20-30. The primary aim of this study was to address the gap in current literature and the impact that anxiety has on a female rugby players performance. The study was conducted in a qualitative manner. There are a number of benefits to qualitative studies. Qualitative studies specifically focus on the understanding of social relations (Maxwell, 2012) and works alongside values, attitudes, beliefs and aspirations which relates to processes and relationships. The main focus of collecting the data was to use semi-structured interviews. Due to the ongoing coronavirus pandemic throughout 2020 and 2021, with government guidelines not allowing people to meet and to stay home, this research study was conducted online through Microsoft Teams. Each participant completed a consent form prior to participating and each participant understood that they had every right to withdraw from the study at any time. The study focused on a qualitative study. Research has shown that competitive anxiety and competition stress is examined through using qualitative designs (Jones, Hanton & Swain, 1994). The interview was made up of seven sections where the participants would firstly begin to discuss their rugby experience, how they prepare or cope with any symptoms following on to examining the extent of the cognitive and somatic symptoms they have felt. Throughout the study, there is a clear relationship between anxiety and performance. There is a perception of a relationship between anxiety and the impact of performance. The participants reported a number of symptoms that they felt both cognitive and somatic, with somatic anxiety having a real impact on some of the players. Some individuals found that when the competition was more intense, their symptoms would increase, but others found through their experience that if they have the correct coping mechanisms in place, then the symptoms are lower. Deliberative and facilitative anxiety were both established throughout with each of these elements being high. Somatic anxiety symptoms were mainly deliberative throughout. There were a number of participants who felt that negative behaviour was the main reason why they would feel anxious before a game. Throughout the research study, there were a number of common themes from participants feeling 'concerns about competition' alongside 'worries about performance'. These symptoms were mentioned by each participant who completed the interview, with a number of common somatic symptoms from 'clammy hands' and 'heart racing'. There is a clear argument that psychologists should incorporate coping strategies to help athletes manage the feelings (Hanton and Connaughton, 2002). The levels of anxiety throughout the study were high with each participant recording at least one symptom. It has been reported that females experience higher levels of cognitive and somatic anxiety in comparison to male athletes Dias, Crus & Fonseca (2010).

Keywords: Competitive State Anxiety, Rugby, cognitive anxiety, somatic anxiety

25. The impact of a ketogenic diet on type 2 diabetes in obese adults: A literature review.

Obesity is a prevalent health concern that affects around 1 in 4 people and is known to exacerbate certain diseases, such as type 2 diabetes, which can lead to further health complications and is becoming a global issue. The following literature review will investigate the effect a ketogenic diet has on type 2 diabetes in obese adults as a mitigating factor. The aim is to understand the benefits and limitations implicated with a ketogenic diet and determine if this can be sustained due to its controversial nature. This is because poor dietary habits are one of the leading causes of obesity and type 2 diabetes and while there are many dietary pathways, a ketogenic diet has been known to have the most beneficial outcomes. In order to find the most relevant literature based around a ketogenic diet for type 2 diabetes in obese adults, in depth research was conducted to find the most relevant research available along with the strengths and weaknesses regarding a ketogenic diet using peer reviewed journal articles only. For this to be effective the SANRA evaluation tool was utilised to identify three main articles to be evaluated for the literature review. This included one study which found that a ketogenic diet produced non alcoholic fatty liver disease in rodents, another study which evidenced improved HDL levels in obese adults with type 2 diabetes compared to high LDL levels in adults who were only obese and another study which identified a lack of data concerning the long term sustainability and safety of using a ketogenic diet. The main findings evidenced that NAFLD is already present in 85% of obese adults and using a ketogenic diet can reverse this, compared to rodents who develop NAFLD as a result of a ketogenic diet due to their inability to digest fats causing obesity. It was also found that a ketogenic diet is more beneficial for those who present type 2 diabetes and obesity rather than just obesity. Ketogenic diets have been known to cause side effects such as fatigue, hypoglycaemia, headaches and vitamin deficiencies, however this can be eliminated by consulting medical advice first, staying hydrated and eating healthy plant derived fats over trans and animal fats. A ketogenic diet can also lower fasting glucose with a mean outcome of 0.5% ($p < 0.001$) and -0.42% ($p < 0.001$) compared to low fat diets. Finally, whilst a ketogenic diet may be controversial in nature due to the restrictions associated, it can reduce obesity and reverse type 2 diabetes but can be hard to sustain for more than a year. It is advised that behavioural interventions be utilised to incorporate healthy behaviours and prevent weight increasing once a ketogenic diet has been stopped. This can include incorporating exercise, education on healthy eating and self management such as goal setting which can have a 53.5% reversal success rate. Utilising a combination of strategies alongside a ketogenic diet can improve quality of life for obese adults with type 2 diabetes if applied correctly.

26. A study to determine the effects of caffeine on time percentage, maximum heart rate and the rate of perceived exertion on a generalised group overall and the inclusion of a more specific effect to individuals.

Caffeine is a legal world-wide ergogenic aid which is widely used by many sports performers in different sports and is used in general on a day-to-day basis for many people (Pickering and Grgic, 2019). Caffeine has been known to improve cardiovascular efficiency resulting in an improvement of running endurance due to the physiological effects on the body (Southward, Rutherford-Markwick and Ali, 2018). The overall aim of this study was to determine the effects of caffeine on time percentage, maximum heart rate and the rate of perceived exertion on a generalised group overall and the inclusion of a more specific effect to individuals. This study was conducted with the use of seven, five being male and two being female (Age 22 ± 4.25) of which were all deemed healthy with no limitations which effect performance or any reactions to the use of caffeine. The main testing procedure of this study was that participants chose a route to run. This must stay the same for all three tests, they will they run their first route without the consumption of caffeine. The second run must be with the consumption of a placebo tablet one hour prior, and the third run with the consumption of a ProPlus caffeinated tablet. Distance did not change as the route was exactly the same for all three intervals. The results for this study found that the only significant difference was found in maximum heart rate (BPM) Non-Caffeinated (174.86 ± 7.29), Placebo (175.29 ± 7.95) and Caffeinated (178.86 ± 6.09) with a significant difference of $P = 0.027$. Although, raw data shows that there is an obvious decline in time it did not show a significant difference, but this may be due to the number of participants. These results suggest that caffeine does have an impact on the physiology of a generalised group due to the increase in maximum heart rate but does not show sufficient results that caffeine can improve performance due to the non-significance of the time percentage and rate of perceived exertion. There were limitations during this study which was mainly the COVID-19 pandemic which did not allow testing to be done in person or in a gym which may have affected the results of this study. This study supports future research suggesting that the methodology should include factors such as a change of dosage due to body weight, once the pandemic is over to analyse the speed at what participants are running at or to ensure that the testing is done indoors to minimise the effects of terrain and weather. This study concludes that the results suggests that caffeine cannot be proven efficient to a general population. This study also suggests that if testing was done in the same place alongside the same environment, motivation and effort levels the results would be a lot more reliable and valid.

27. A Mixed method investigation into the cognitive appraisal and coping strategies associated with a challenging downhill mountain bike run.

Sport Psychology addresses the interaction between Sporting performance and Psychology (Barker et al., 2016). Downhill Mountain Biking is regarded as an extreme sport, where the risk of serious injury is quite high. The main aim of this study is to understand the competitive state anxiety a biker may experience. Competitive state anxiety is generally made up of two components, cognitive anxiety (the mental component) and somatic anxiety (physical symptoms), these will be analysed as well as how they prepare for competitions or tough runs, and how they recovered from injuries. Hanton, Thomas, Maynard (2004), found that international athletes interpreted both their somatic and cognitive anxiety in a more positive manner which indicated that the more experienced an athlete is, the less intense are the symptoms.

The interviews that were concluded involved 6 individuals 18 years of age and above, the mean age of the group was 38 (SD +/- 11.64), with at least 5+ years of experience. Data was collected using a mixed-method approach, with both a Semi-structured interview, with an Interview guide to help give a slight structure to the interview, which ranged between 30 to 40 minutes in time, there were 47 pages of typed transcript, and the modified CSAI-2 (Martens et al (1990), questionnaire. 12 individuals were sent the CSAI-2 but only 8 completed forms were returned. It was found, from the CSAI-2, that the average intensity for the group generally experienced higher intensity levels of cognitive anxiety (2.42) than that of Somatic anxiety (2.3), with the somatic anxiety being perceived more negatively than that of cognitive anxiety. The degree of self-confidence within this group did not seem to affect the results of either the cognitive anxiety or somatic anxiety as the self-confidence intensity remained fairly constant throughout.

From the Interviews that were concluded it was clear to see that the more experienced in competition a rider was the more cognitive anxiety symptoms they experienced and was generally perceived negatively. The less experienced rider endured more somatic anxiety perhaps due to their lack of experience prevented them appreciating extent of the dangers and risks connected with the sport in which they were taking part.

Pre-ride routines were seen to effectively reduce the intensity and direction of the anxiety symptoms experienced, for some participants it was as simple as just checking the mechanics of the bike, while other participants it was seen to be more complex with specific music being played and eating and drinking specific items. Some participants stated that they are still more cautious when riding after being the injured than when they were prior to the injury, which supports the statement made by Vega et al., (2017). The results of this research into the cognitive and coping strategies associated with a challenging mountain bike run showed there is no standard level of either cognitive or somatic anxiety felt by riders in general and no one clear coping strategy used by participants, the coping strategies will be different for every individual. The practical implications of this study should assist sport scientists and sport psychologists to appreciate and understand the different coping strategies that could be utilised by very experienced mountain bikers when they experience extreme anxiety symptoms. Further research might examine the different areas of mountain biking not restricted to downhill mountain biking.

28. Does the England RFU activation warmup improve high intensity running performance? A study on amateur level rugby union athletes.

The high intensity running performance of rugby union players has been suggested to play a role in the success of rugby union teams at the elite level (Fornasier-Santos et al. 2020); with many of these high intensity runs being performed within the first 10 minutes of an 80 minute match (Jones et al. 2015). Therefore, the aim of this study was to see if the implementation of a warmup prior to exercise could enhance this high intensity running performance and therefore potentially increase the chance of success for rugby union players. The study was conducted on 16 amateur rugby union players from local clubs (11 males and 5 females) with an average age of 25.2 ± 12.8 years. The subjects were split into three groups in order to perform different interventions in different orders to avoid familiarisation with testing. The warmups included a lap of the pitch as the control and two intervention warmups which included a dynamic stretching warmup and the England RFU activation warmup. Once one of the warmups were completed the participants had to complete a 1.2km shuttle run test in as short a time as possible. Testing occurred three times over the course of multiple weeks, each time the participants performed a different warmup prior to testing. Times for the shuttle run test were then recorded for all 16 participants across all three warmups. The results found that the times for both the dynamic stretch warmup ($06:21 \pm 00:40$) and the RFU activation warmup ($06:09 \pm 00:42$) were significantly faster than the times for the control group ($06:34 \pm 00:44$) both with a significance of $p < 0.05$. It was also found that there could be possible benefits of the RFU activation warmup compared to the dynamic stretch warmup, but this benefit was not significant ($p = 0.058$). The improved time of the dynamic stretching warmup was attributed to a greater force production upon contraction of the stretched muscles; while the improved time of the RFU activation warmup group was attributed to faster muscular contractions due to increased phosphorylation of myosin regulatory light chains. The findings of this study could be implemented by a coach when designing a warmup for a rugby union team prior to a game in order to optimise the team's high intensity running performance; it could be suggested from the findings that the warmup should include dynamic stretching and possibly some post activation potentiation exercises in order to maximise the benefits from the warmup. This study had a few limitations during the testing process, mostly due to the Covid-19 restrictions in place at the time. Due to these restrictions, testing could not be conducted face to face in a controlled environment so results might have been due to human error of the participants or external variables such as weather. Future research is needed to confirm the findings of this study and additional areas such as strength, power and speed should be explored to truly understand which warmup can maximise performance in rugby union.

Key Words: Warmup, Dynamic Stretching, Post Activation Potentiation, Rugby Union, Running.

29. The importance of nutrition in improving sprint performance.

The main goal of this research was to expand the knowledge about the importance of nutrition in improving sprint performance. Within the introduction of the paper, it was focused on research regarding nutrition and sprint performance and the importance of consuming the correct nutrition in the correct amounts. Also included is the training structure for sprint athletes which involved how frequent they train and why nutrition has such an impact on the performance and the recovery of athletes. The research paper was based on conducting a literature review from existing research papers and reports, reviewing and evaluating the data in order to discover how nutrition can affect or influence sprint athlete performance enhancement. The literature review was conducted using a mixed research methodology, which included the use of both qualitative and quantitative approaches to expand the scope of the study. Included in the Literature review was the intake and correct timings of carbohydrates to be consumed, the intake and correct protein timings to be consumed, the impact of nutritional supplements on sprint performance and how many athletes currently use nutritional supplements, nutrition consumption (pre, mid and post exercise) and how it can help performance and recovery periods, effects of caffeine which includes the effect of energy drinks on performance, and beetroot juice. Each sub heading expanded on the knowledge of the focused area which had included facts, primary research and studies in order to back up the research. The data was analyzed using statistics obtained from the literature review, such as the percentage of suspended athletes, the use of nutrition supplements, carbohydrate, protein, and caffeine consumption, and the use of energy drinks. The results that were gathered had shown that 12% of professional athletes are currently suspended due to supplementation, 64% of athletes currently use a form of supplementation, 45% of athletes buy them from a store, whereas 24% are provided with supplements. Carbohydrates should be consumed 1-4 hours prior to event to let the glycogen breakdown into energy, 67% of athletes are unsure of the correct amount of protein should be consumed and that caffeine in the form of an energy drink has no effect on sprint performance time. The findings from primary research and studies provided from the literature review show that nutrition can improve sprint success, although there is a lack of proof that supplementation can be used as a nutritional supplement in order to improve sprint performance. The results addressed additional concerns about nutritional intake to improve sprint success, which would need to be researched and investigated further to be able to elaborate on the current available research.

30. A study to determine whether or not vegetarians and vegans are more conscious about their health and more socially informed than meat eaters.

In a difficult year with the COVID-19 pandemic, where it has been proven that maintaining good health and a healthy weight could insure individuals are less affected by the virus (Jordan, Adab and Cheng, 2020). Encouraging more people to switch to healthier diets such as vegetarian or veganism, could make a significant difference on the effect new variants have on the population, potentially reducing the need for further vaccination and hospitalisation. Therefore, research into why people follow vegetarian and vegan diets has particular relevance during current times. Health, the environment and animal welfare represent three of the main reasons that people cite for following a vegetarian or vegan diet in western societies. Vegans and vegetarians appear to place greater value on their health, sustainability and environmental issues and animal rights welfare concerns than meat eaters. Indications suggest that the dietary choice to become vegetarian or vegan has a correlation with health knowledge and social awareness. Previous research has also found that vegetarian and vegan individuals adopt other lifestyle markers that indicate higher levels of both health knowledge and social awareness.

The purpose of this study is to determine whether or not vegetarians and vegans are more conscious about their health and more socially informed than meat eaters. The design of this study uses a quantitative methods approach. An online survey including ten dimensions was used for data collection. The dimensions included were: Health, Exercise, Cooking at home, Calorie-counting, these first four were designed to assess links between dietary choice and personal healthcare. The second four: Government policy, Community, Animal rights, Animal welfare, evaluated if there was a correlation between dietary choice and social awareness and finally: Sustainability and Environment, which link to social awareness but also indicate connections between dietary choice and social responsibility. Seventy-one participants aged 18 and above were recruited to complete the survey using online mediums including email and social media platforms.

The completed surveys have suggested that personal health care is rated similarly important across dietary choice groups, with no significant difference between the two groups in any of the four data points (health, calorie counting, exercise and cooking at home) that are indicative of health awareness. In addition to this, social awareness is similarly important to individuals across dietary choice groups. The only areas which displayed a significant difference were sustainability and environment where the vegetarian and vegan groups placed a higher importance on social responsibility than their omnivore counterparts. Future research could look into whether the vegan or vegetarian diet leads to greater feelings of social responsibility or whether greater feelings of social responsibility leads to individuals adopting a vegan diet. Developing awareness of the benefits of choosing a vegan or vegetarian diet in regard to the environment and sustainability is raising global interest and many government policies are now facilitating this choice as a part the government's 'net zero' promise to reduce the UK's emissions by 100% percent of the 1990 levels by 2050 (GOV, 2020).

31. Nutritional Support of an Oncology Patient: A Systematic Review.

Background: Cancer is a leading cause of morbidity and mortality worldwide. Poor nutrition status is common among cancer patients due to impaired digestion and nutrient absorption. Severe malnutrition occurs in 50%- 80% of cancer patients. This poor nutritional status is an ominous sign in cancer patients which can be used to predict disease progression and shortened survival time. As a result, nutrition support is provided for cancer patients as a means to improve clinical outcomes. Nutrition interventions within oncology are recognised as essential, however nutritional support is not accessible to all patients. Given the significant and rising incidences of nutrition risk and malnourishment, as well as cachexia management remaining a challenge within clinical practice, the vitality of a multidisciplinary approach with targeted nutrition to improve the quality of care within oncology is highlighted. **Methods:** A literature search in Google Scholar, ProQuest, University of South Wales Trinity Saint David library website and PubMed was carried out from 25/09/2020 – 08/10/2020 to identify systematic reviews, observational studies and peer-reviewed articles from January 2010- September 2020. The search consisted of terms on: "Oncology", "Cancer", "Nutritional Status", "Nutrition Support" and "Nutritional Treatment". Alterations for British and American English will be made for all searches. All reference lists included in the relevant articles generated by the search were also examined. A Small number of books were utilised, when found to be relevant and valuable to the project outcome. Relevant articles are discussed within this paper. **Results:** Recent literature encourages integration of nutrition screening and assessment within oncology. Nutrition intervention is mandatory alongside any treatment due to the improvement of nutrition parameters, symptoms, quality of life and in due course survival rate, it has reportedly had. Evidence suggests, through use of nutrition intervention symptoms of both the cancer itself and treatment being received were reduced significantly; abdominal pain by 11%-13.5%, constipation by 19.2%- 21.4%, fatigue by 9.6%-12.1%, alterations to both taste and smell by 26.8%-27.2%, epigastric pain by 9.6%-11.7% and diarrhoea and stomatitis by 7.7-8.9%. Difficulties arising from PEG feeding included vomiting (71-76%), diarrhoea (28%-33%), infection of the PEG site (38%-46%) and leakage (46%-54%). Key issues that also emerge include disturbed sleep, difficulties in finding a place to feed, family divisions and negative attitudes towards feeding. However, parenteral and enteral nutrition has been found to positively impact a patient's physical strength by between 53% and 68%. **Conclusions:** Nutrition intervention has been shown to significantly decrease symptoms experienced from both the cancer itself and the treatment being received A thorough and proactive need for assessment of the clinical alterations that occur within cancer is essential when selecting the adequate nutritional intervention which will allow for the best possible impact on nutritional status, treatment efficacy, reducing complications and improving both survival and quality of life.

Keywords: Oncology, cancer, nutritional status, nutrition support and nutritional treatment.

32. Does people's lack of preparation effect upon the outdoor industry in terms of good name, possible dangers and benefits of outdoor adventurous activities?

This research project explores does people's lack of preparation effect upon the outdoor industry in terms of good name, possible dangers and benefits of outdoor adventurous activities, my aims were to look at if this were true and to see if people would prepare properly before undertaking an activity such as mountain walking (Lorenzoni, 2006) There were two main goals for this project and that was to find out if social media had any sort of impact on how people view the outdoors and the other was to see if that they lack the knowledge to keep themselves safe when going mountain walking (Kastenbaum, 2012) The literature review opens up a number of different opinions from professionals about what kind of equipment that people should take with them fi they would do an activity such as mountain walking, there will also be a number of different opinions about different aspects of the outdoors such as how being confident is good but being overconfident could lead to other things which could go wrong (Burns, 2008). The results from the questionnaire, found a variety of different responses from all ages, raging from 18 to upwards of 51+. All of which were able to complete the questionnaire and fill it out with their own feelings and thought about the outdoors, specifically walking up mountains. The data which was gathered showed that a clear number of people knew exactly what they were doing, and that the majority of people felt comfortable and took the necessary precautions before going mountain walking, but at the same time there was a very small minority of people who did not really know how to prepare before going mountain walking which could then lead to accidents on the mountains which would then reflect badly on the outdoor industry. Overall, the project took a number of different feelings and opinions into consideration. But at the same time if I were to do it again then there are a number of different aspects which I would change such as narrowing down the questions asked to ensure that I get a more indepth feel of how people are on the mountains. The questionnaire would also be active for a longer period which would then allow me to gather even more data and analyse it further to support or even go against what my thoughts were. Through this it would give me a better understanding of how it would then be possible to ensure that everyone is able to access the correct information to ensure that everyone will be safe when they are going mountain walking.

33. Exploring the causes and determinants of anorexia nervosa: a review of the evidence.

Background: Anorexia Nervosa is known as the most severe form of eating disorder causing severe illness and mortality (Fombonne, 1995). There are many causes of anorexia nervosa and are all common amongst females and males, of all ages. A quest for weight loss is the targeted outcome of anorectics through little food intake and excessive exercise resulting in severe malnutrition and being of an extremely unhealthy weight (Kaye et al, 2009). With there being so many causes and contributing factors to the illness it remains a challenge for professionals to take hold of one preventative intervention. Nutritional rehabilitation is however, one of the best used tools to ensure inpatient and outpatient suffers can recover safely to a healthy weight and reverse nutritional deficiency (Rock., 2010).

Methods: A systematic search was carried out using the electronic databases Google Scholar, Wiley Online Library and PubMed. Rigorous search terms were applied to locate appropriate studies and key words such as 'Anorexia Nervosa' 'Nutritional Rehabilitation' 'Causes' and 'Determinants' were used. The recovered studies were reviewed using a stringent inclusion and exclusion criteria. All non-English articles recovered were removed and the appropriate alteration from American English were made if necessary. Alongside the articles several books with relevant information were utilised. CASP was used to test against the studies that entirely met the inclusion criteria. Nine studies were then advanced to the review stage following this process. These articles were then used for discussion within the paper. Analysis of the data from the studies was then able to be done through thematic analysis.

Results: Recent literature encourages a further understanding of the causes of anorexia nervosa and where not preventable an encouragement of rehabilitation and recovery is also undertaken. All causes of the illness target females and males, it is more prevalent amongst females. There has not shown to be any one way to prevent this illness despite the causes being recognised. There is such a vast array that they unfortunately can not all be controlled. Genetics and certain environmental factors fall into this category. Where preventability is not a possibility, recovery is the only option. Nutritional rehabilitation as a part of the recovery process has been found to have high success rates for inpatients through the method of refeeding. Outpatients have also continued to have high success rates of continued recovery through this method.

Conclusion: Anorexia nervosa and its causes are significant to the understanding of preventability and recovery as supported by the discoveries in this study and the wider literature. Additional and future research could be used to address the gaps such as, how large organisations could be targeted for educational purposes to acknowledge and change the damage that can be caused to individuals. A larger inclusion of males in future research could also be beneficial to make this problem a more normalised one.

34. A literature review-based study into leadership as a gendered construct and how this might influence parity within the sector.

This thesis is a literature review-based study into leadership as a gendered construct and how this might influence parity within the sector. It examines the links between leadership culture, the female perception of competence and belonging through a meta-analysis of empirical research conducted by accredited scholars and practitioners with extensive experience in the outdoor sector within the last twenty years. Employing Braun and Clarke's method of a deductive thematic analysis at a latent level was based on reducing bias and identifying the underlying ideas, ideologies, and conceptualisations by delving into the features that have given it that particular form and meaning. The narratives were viewed three-dimensionally to comprehend the depth of the issue, the meaning, and the successive history. Deductive analysis was chosen as opposed to an inductive analysis method as the themes were identified from previous research by authors Isabelle Breslin and Clive Palmer (2016)- 'Exploring self-perceptions of female leaders in the Outdoors'. The core elements and themes were identified in this specific qualitative research study. Therefore, an inductive analysis would not have been appropriate as there was already a pre-existing coding framework. Although the difference is that this study delved deeper into the leadership culture, pre-existing gendered constructs, and the narratives of women in the outdoor education sector. Consequently, this led to discuss the concept of the female perception of belonging. First, preconceived themes were clarified (self-perceptions, gender constructs, and challenges for women as leaders), analysing the textual data led to the emergence of codings which were as follow: imposter syndrome, sense of belonging, lack of confidence in technical skills, role models in leadership, gender bias, the ideology of leadership, femininity and hegemonic masculinity, penalties of success, leadership culture, the labyrinth of females in leadership, parenthood, and sexual objectification. These were recurring challenges that highlighted a pattern across the data set, so therefore the prevalence formed these codings.

The research collated from the 2000s onwards would suggest gender disparity regarding leadership roles in Outdoor Education is still underrepresented and remains a dominant male preserve. This is not to say that there is not equality in outdoor education, as there is evidence to suggest women have equal opportunities, make sound leaders, and accomplish successful careers, but it is clear there is a lack of female leadership in the adventure industry. The accent is that women in leadership bear microaggressions in the workplace (from both men and women alike) evidence has suggested due to the genders being pushed through different societal socialisations. Further the research has indicated that women lack self-efficacy in their competency, and this influences their sense of belonging- perhaps even participation. This potentially paves the way for further research into this field of study concerning future women leaders emerging from Generation Z.

The limitations of this study were that the sources were from developed Western countries such as Australia, Sweden, United States, and the UK, and arguably, were the narratives of only white females. This creates a strong cultural bias as the cultural/societal norms may be significantly different to those in the UK concerning gender norms. Women of other ethnicities have been excluded to narrow down the search, but this also create a racial bias.