UNIVERSITY OF TARTU

Pärnu College

Department of Tourism Studies

Akpoveta Everest Obatitor

THE IMPORTANCE OF COASTAL ENVIRONMENT IN PROMOTING HUMAN HEALTH AND WELLBEING

Master Thesis

Supervisor: Melanie. K. Smith PhD

Pärnu 2014

TABLE OF CONTENTS

Introduction	3
1. Theoretical Approach of Coastal Environment in Relation to Wellness	6
1.1 Wellness in the Context of Coastal Areas	6
1.2 Health and Wellbeing	11
1.3 Coastal Wellness	14
1.4 Coastal Tourism in Relation to Health and Wellbeing	20
2. Theoretical Approach to Coastal Environment in Relation to Health and Wellbe	ing26
2.1 Importance of Coastal Environments	26
2.2 Health Benefit of Coastal Environments	29
3. Research Outcome and Discussions	35
3.1 Research Method and Samples	35
3.2 Research Outcome and Analysis	39
3.3 Discussion of Research Outcome and Suggestions for Further Study	55
References	66
Appendix (1)	73
Rannikkoalueiden/ympäristöjen tärkeys ihmisen terveyden ja hyvinyojnnin mainostamise	essa 79

Introduction

The ocean coastline (coastal environment, seaside, waterscape and seashore) is known to have attracted humans for thousands of years and still continues to do so even in this modern age. It is perhaps very hard to imagine a world void of coastal zones and more specifically the oceans as their importance to life are numerous to count. As it is known, more than 70 percent of planet earth surface is covered by water and that the oceans contain 97 percent of it.

More than for marine food and drink, recreational opportunities and transportation, the ocean also acts as a climate regulator by redistributing heat around the world; evaporation from the ocean forms the moisture that results in rain on land, the plankton in their uppermost layers help stimulate cloud formation due to the chemicals they naturally emit and plays a crucial role in temperature regulation of the planet (Monitor of Engagement with the Natural Environment 2013).

Coastal areas are commonly defined as the interface or transition areas between land and the sea, including large inland lakes (United Nations Environment Programme. UNEP-WCMC). The sublime admiration for coastal environments in today's world is an interesting phenomenon globally, especially in urban areas. Coastal environments as a tourism product or attraction, command volume of sales and visits annually and have been doing so for many years. In fact, it can be said that coastal environments offer to mankind numerous qualities that are tangible and intangible. It is a picturesque attraction that brings delightfulness and also world of therapeutic necessity to humans, history and even the present age testifies of it.

The ocean and its shore (more than countryside – may be disputed!) indisputably represents some vital aspect of nature, which is more than just scenery, its total qualities and services to life are still under discovered, one may argue. As explained by Corbin A. (1994), the sea was expected to cure the evils of urban civilization and correct the ill effects of easy living while respecting the demands of privacy.

Ever since the notion of leisure time became a practice of a common citizen, many have ceased this opportunity to explore and enjoy seashores as a means to recuperate. To some extent, the ancient roman thermae or balnea bath is an indication of how important a body of water played in social and cultural life. Various accounts of academic works in the field of wellness and spa also document how wealthy Romans escape from cities during hot summer season to experience the seaside or coastal spa resorts.

While seasides do provide an array of leisure and recreation activities and do possess scenic qualities, which may have commanded large numbers of tourists and locals to visit, many individuals are now beginning to recognize and value its benefits to health and wellbeing (again). Perhaps this kind of understanding will lead to a better sustainable approach to how coastal environments are used in general. Health, wellbeing and wellness are connected field under the promotion of human health and wellbeing and they are discussed from the perspective of stress-reduction, promotion of quality relaxation, increased attention, enhanced positive mood, and other therapeutic health benefits.

Modern urban constructions are not behind in recognizing the positive impact of waterscapes as it can be noticed in various developmental projects, public space planning and marine environmental protection. As a result, nowadays, more and more waterfront areas or apartments and other types of body of water are being built to create a more healthy living environment and public space.

This phenomenon makes the author wish to raise curiosity about the value people in the general population attach to coastline environments. As seaside culture is passing from generation to generation, the way it is seen seems to change with the passage of time. Bearing in mind all the precedes above, this paper ponders for a moment and asks, irrespective of activities and leisure facilities available at coastline destinations, do tourist holds the view and value coastal environments independently as places that promotes health and wellbeing?

The aim of this research paper is to understand the views of individuals about coastal environments in relation to human health and wellbeing.

Based on the chief goal of this research paper, the following objectives are set:

- To understand the ways coastal areas affect personal health and wellbeing through existing literature
- To understand whether health and wellbeing influence the choice to visit coastal environments
- To find out which elements of coastal environments is perceived as being most beneficial to wellbeing
- To seek people's opinion concerning coastal environments for better promotion of the said landscapes as wellbeing destinations

Based on various literature reviews on the field of coastal environment, human health and wellbeing, the author came up with the hypothesis that coastal environments do help to reduce stress levels, promote quality relaxation, increase attention levels and enhance positive mood. Thus, this paper seeks to test the above hypothesis which is in line with the aim of thesis.

To test this hypothesis, a sample of individuals that have experienced coastal environments during the past 24 months were taken – in this case, the sample refers to individuals from the age of 20 and above who have visited any sea (beach and coastline) geographical environments.

Thus a quantitative research method (both closed and open ended questions) is used for data collection with the aim of investigating specifically the view of individuals who have visited coastal environments whether their experience of such environments support the proposed hypothesis.

1. Theoretical Approach of Coastal Environment in Relation to Wellness

1.1 Wellness in the Context of Coastal Areas

As noted by Westgate, (1996) the term wellness appeared as part of a parallel transformation in the definition of health toward a more holistic perspective that is interrelational, positive in nature, and focuses on the examination of healthy human functioning. This expanded view of health allowed the development of preventive health measures and a focus on optimal health as practitioners address the whole person, and consider the causes of lifestyle illnesses rather than just their symptoms. Current literature reveals additional terms corresponding and interrelating with the notion of wellness, namely wellbeing, quality of life, life satisfaction, happiness and general satisfaction (Miller and Foster 2010, p. 9-10).

As there are various ways to understand the concept of wellness, thus, a philosophical approach is taken from different academicians in the field. However, some authors have conceptualized wellness as a continuum and not an end state (Arlington and Dunn, 1977; Myers, et al., 2005; Sackney, et al., 2000). Wellness is a way of life oriented toward optimal health and well-being in which the body, mind, and spirit are integrated by the individual to live more fully within the human and natural community (Myers, et al., 2005, p. 252). Such a holistic view as Larson (1999, p. 123) states that the World Health Organization (WHO) was the first to introduce a holistic definition of health as "a state of complete physical, mental and social wellbeing and not merely the absence of disease and infirmity" (1948), and many subsequent conceptualizations of wellness include this central concept.

However, the modern views of the wellness concept hold its understanding very much to the work (high level wellness) of Dunn (1959). Wellness is an integrated method of functioning which is oriented toward maximizing the potential of which the individual is capable. It requires that the individual maintain a continuum of balance and purposeful direction within the environment where he is functioning, (Dunn 1959, p.4-5). Dunn's works stressed the importance of mind, body and spirit connections, the need for satisfactions and valued purposes, and a view of health as more than non-illness. The following are Dunn's, (1959) concept of wellness:

- Wellness is a continuum rather than a specific fixed state. All individuals, depending on their particular circumstances, are located somewhere along the continuum between death and wellness
- Wellness is a holistic approach to health, encompassing physical, mental, social, cultural and spiritual dimensions
- Mental wellness is the responsibility of the individual and cannot be delegated to someone else
- Wellness is about potential, it involves helping the individual move toward the highest state of wellbeing of which he or she is capable
- Self-knowledge and self-integration are the key to progress toward high level wellness

Such an understanding is in agreement with Myers, et al,. (2005) by emphasizing the part of individual initiatives toward achieving a high level of wellness. Thus, wellness can be seen as building rational bridges between the biological nature and the spirit of humans - the spirit being that intangible aspect that transcends physiology and psychology of existence. This also express the fact that human total health and wellbeing is connected to the three interrelated and interdependent energy of the body, mind and spirit (Miller and Foster 2010).

Ardell (2004), however reveals a slightly different view regarding the wellness concept that critical thinking, personal responsibility, physical fitness, a secular quest for added meaning and purpose and a comprehensive, positive view of health set far beyond the margins of normalcy and moderation. In reference to

that, Kelly (2000) stated it has been argued that wellness is subjective, inherently has a value judgment about what it is and what it is not, and that an accurate definition and measurement of the construct is difficult.

While all or nearly all definitions indicate the interconnected nature of wellness as body, soul and spirit, it is hard to understand where or how to achieve the balance between these three pillars of wellness. Furthermore, the six or eight dimensions of wellness extend the conceptualization of this field to other areas of studies. The question may be asked, how can one have and maintain a healthy balance of wellness practice across its entire dimension? As the word wellness is fully exploited by tourism businesses for marketing purposes, the aspect of individual orientation to strive for optimum wellbeing somehow is getting unclear. The main philosophy behind wellness lifestyle in some instant is being reduced by certain businesses operating in the field for not engaging and exposing customers to the main idea of wellness. Wellness in its totality is more than tourism service and should influence a new way of life for an individual who is new to the concept. Irrespective of how wellness may be defined across various stakeholders, the following should be remembered as stated (Global Spa Summit, 2011, p. 10):

- Wellness is multi-dimensional
- Wellness is holistic
- Wellness changes over time and along a continuum
- Wellness is individual, but also influenced by the environment
- Wellness is self-responsibility

The central areas of wellness as being a combination of having a strong sense of identity, a reality-oriented perspective, a clear purpose in life, the recognition of a unifying force in one's life, the ability to manage one's affairs creatively and maintain a hopeful view, and the capability of inspired, open relationships (Miller and Foster 2010, p. 10). In addition, to reach a state of health an individual or a group must be able to realize aspirations and satisfy needs, and to change or cope with the environment, World Health Organization (WHO, 1986, p. 2), while Bouchard et al. (1994, p. 23) suggest that positive health pertains to the capacity to enjoy life and withstand challenges.

Lastly, there is a clear distinction between health and wellness by saying that health is a state of being, whereas wellness is a process of being (Jonas, 2005, p. 2). Jonas (2005), defined wellness as a way of life and living in which one is always exploring, searching, finding new questions and discovering new answers, along the three primary dimensions of living: the physical, the mental, and the social; a way of life designed to enable each of us to achieve, in each of the dimensions, our maximum potential that is realistically and rationally feasible for us at any given time in our lives.

In a likewise manner with the conceptualization of wellness with various authors penetrating different angles to explain what constitutes wellness, so is it for its components. Over the years, many scholars have explored and defined the different components or interrelated areas that include wellness. Wellness encompasses physical, psychological/emotional, social, intellectual, and spiritual dimensions as noted by Depken (1994), which is supported by Greenberg (1985) that wellness is the integration of the five dimensions and high-level wellness as the balance among them, but used the term mental wellness in place of intellectual wellness. Others like Anspaugh et al. (2004) have extended the components beyond that dimension; physical, emotional, social, intellectual, spiritual, environmental, and occupational.

For this particular paper, the seven dimensions indicated by Anspaugh et al (2004) are adopted among others. However, attention is only given to the environmental dimension and from the perspective of coastal areas in relation to human health and wellbeing. Most environmental wellness focuses mainly on sustainability issues and relationship with nature for example; involvement in a recycling or community clean-up effort, reducing pollution and waste (Miller and Foster 2010, p. 15). Natural environments can be a break from busy and stressful condition, a place to get some fresh air, to exercise or play and a place to go and relax (Department for Environment, Food and Rural Affairs (DEFRA) 2011). Natural environments are increasingly being considered as key setting for health promotion (Völker and Kistemann 2011); (DEFRA 2011).

Waterscapes (coastal environments and other kinds) specifically are gaining more attention for their health benefits and as places of therapeutic landscape. Waterscapes are favourite places to spend leisure time and for recreational activities, restoring people from everyday stress and sharing activities, partly developed into rituals, which help to enhance physical and mental wellbeing, (Völker and Kistemann, 2013, p. 150). There are at least two reasons for thinking that experiences of natural (coastal) environments will be positively related to health, wellbeing and happiness: There appear to be direct pathways by which such experiences affect the nervous system, bringing about stress reduction and restoration of attention. Natural (coastal) environments might increase happiness by facilitating and encouraging – for practical, cultural and/or psychological reasons – behaviours that are physically and mentally beneficial (DEFRA 2011).

A key question to this debate would be, if connectedness is required to experience the health benefit of coastal areas? Also, will the positive health and wellness enhancing value associated with coastal environments be felt in the case of bad weather conditions or awareness of local problems that may portray given waterscape as a danger zone? While it is not the aim of this paper, an answer to both questions will help to further understand how and when to maximize the health benefits of coastal areas.

In a world besieged with a fast pace and a load of tasks waiting to be tackled coupled with urban life conditions, life tends to lean on the part of stress and other wellbeing diminishing effects that makes everyday life less enjoyable. Urban life seems to separate its dwellers from the health promoting attributes of nature, more specifically that of coastal environments. As mental illness is on the rise, prompting more health challenges (Koss and Kingsley 2010, p. 447), coastal landscapes can serve as a counteracting agent by producing restorative effects, positive mood, calmness and a feeling of improved mental wellbeing (Wheeler et al., 2012; White et al, 2013). These aforementioned positive effects of wellbeing are vital for personal wellness from a holistic point of view whereby an individual can physically enjoy the picturesque nature of coastal environments, feel connected to its healing effects mentally and value it as a protector.

1.2 Health and Wellbeing

With more than half of the world's human population now living in cities, and in that proportion projected to increase in the foreseeable future, cities are important determinants of future sustainability and human health and wellbeing (Bai et al., 2012, p. 465). While it may be a crucial task to link urban environments with the value of health and wellbeing outcome in a sustainable manner, the fast pace of urban development currently has brought some stress factors people especially in an area with no close proximity to natural environment. Health in this discussion is defined as a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity (WHO 1948). And according to the same institution, estimated that by 2020, depression and mental illness will be one of the greatest health burdens. Such projection is no surprise going by the trend of urban congestion and life demand in those environments.

Various health challenges are been faced by humans globally, for instance, as of 2001, 2.4 million Australian people suffered obesity and 4.9 million people where overweight, with trends indicating that this will only increase (Koss and Kingsley 2010, p. 447). Such unwanted situation may be caused by inadequate health literacy as Tokuda et al., (2009) pointed out. As reported, 48 percent of U.S. adults lack the reading and numeracy skills to fully understand and act on health information and similarly substantial portions of European populations have also been shown to have inadequate health literacy (Tokuda et al., 2009, p. 411). In this case, inadequate health literacy means the lower use of preventive services, delayed care-seeking when symptomatic, poor understanding of one's medical condition, low adherence to medical instructions and poor self-care (Tokuda et al., 2009, p. 411).

In this view of inadequate health literacy, humans have a major part to play for ensuring good health and wellbeing, but for one to be able to do so, various interventions from the health sector and other societal engagement in different sectors such as water supply, sanitation, housing, transport, education and all levels of governmental involvement is also vital. Human health is a complex issue as it is known, but environment can be designed to support and promote health

and wellbeing, and this is where natural environments come to the play (Bai et al., 2012).

In respect of all the observations concerning human health and wellbeing, attention is only given to how natural environments specifically coastal zones and their relation as natural space that promote wellbeing, as a number of literature like (Koss, and Kingsley 2010; White et al., 2013; Wheeler et al., 2012) indicates that humans benefits from contact with natural environments. A recent investigation from White et al., (2013) stated that the rate of self-reported good health in communities was higher in for those communities located nearer to the sea coast. Furthermore, that health benefits in terms of low mental distress and life satisfaction are higher for those living 5 km from the coast White et al., (2013) and other positive benefits include stewardship, connection to place, improved social capacity and improved health and wellbeing (Koss and Kingsley 2010, p. 448). However, such approaches to counteracting mental distress as indicated above can be seen at times as non-Western practice.

There are many ancient non-Western cultures that embrace a holistic approach to health and illness which includes a focus on the interconnections between the mind, body and spirit (Mark and Lyons 2010, p. 1756). This holistic perspective, which is alternative to mainstream understanding and health practices, is very natural in the context of nature and wellbeing. As noted by Mark and Lyons (2010, p. 1757), indigenous cultures frequently believe that all life is interrelated with one another, the environment and the universe, and that holism is the most appropriate way to understand health and wellbeing. For example, Matsigenka people of South America see health and wellbeing as a holistic reflection of biological, cognitive, emotional, social, environment and psychological aspect of their lives (Izquierdo, 2005, p. 780).

These types of views are gaining popularity in the context of wellness, which is resting on the three pillars of mind, body and soul. The role nature (coastal zone) plays in human health and wellbeing is starting to gain more and more awareness, which is very important at this age where there are increases in the number of undesirable health outcomes (not necessary a mind-body-soul experience is

derived from coastal areas but well-known for mainly physical and mental benefits). On the contrary, various human activities are negatively affecting nature in a way that it might affect healthy migrants associated with wellbeing. For this reason, new policy initiatives would need to balance potential benefits of coastal access and impacts, and overdevelopment of coastal residential and recreational locations (Wheeler et al., 2012).

As noted by Andrews et al,. (2014), in a review of wellbeing, explained that academic literature typically positions wellbeing as a state of life, distinguishing objective wellbeing from subjective. It is stated that the former is statistically measured narrowly via substitutes or components such as health status, while the latter is often assessed by individuals with specific areas such as life satisfaction and general happiness. Whichever way, wellbeing must connote a meaning in a way that it can be rated.

Irrespective of different definitions or meanings wellbeing might carry across academic discourse, for the aim of this project. The author welcomes the idea of Andrews et al., (2014), which described wellbeing specifically with regard to the environment and portrays it as health benefit obtained from a particular place following an individual's physical movement into them and subsequently as a result of experiencing and understanding the qualities places offer. However, whether an individual understands the qualities of a given place or not, it is possible that the health reward associated with coastal environments can still manifest when such a space is experienced. It might be argued that wellbeing can be in the way that it surfaces, free from objective or subjective judgements, itself part of the environment (Andrew et al., 2014). In other words, wellbeing might initially emerge as an affective (coastal) environment; the environmental action, then feeling of that action, prior to meaning.

These propositions (obviously) speak quite fundamental to the when and how, as a state of existence, "well comes into being". It indicates that wellbeing and environment might be entangled more frequently, earlier and more thoroughly than previous scholarship has thus far proposed. In short, recognizing affective

processes, if not leading to a universal theory of wellbeing as such, certainly contributes to a more comprehensive understanding of it (Andrew et al., 2014).

In the context of wellness tourism, health and wellbeing are viewed from the well-known holistic angle of body, mind and spirit. A growing body of opinion holds that the new millennia will mark a new phase in human evolution. It is clear that within the lifespan of the current generation, humanity will need to come to terms with the limits to growth and develop sustainable ways of living well in the world Marc Cohen in (Global Spa Industry, GSI 2010). In this understanding, the spa industry is therefore also poised to lead the way and offer solutions on how to achieve sustainable wellbeing on a finite planet (GSI, 2010). A sustainable wellbeing will require deeper understanding of the planet Earth, with government agencies looking at health care systems and environmental management models in a more holistic way, such as: embracing the ecological theory of health, indigenous models of health, and practices such as forest schools (Koss and Kingsley 2010).

1.3 Coastal Wellness

Water according to recent trends is considered as an important element of landscape and also is expressed in the embodiment of settlement areas in which great importance is attached to water. Landscapes have been identified as being both health-promoting and health-limiting at the same (Völke and Kistemann 2013, p. 142). The role water plays in physiological health is very clear, life without it cannot be imagined. Aquatic environments were revered in many ancient societies (e.g. Egypt, Greece, Rome) as indicated by Solomon, (2010, p. 15) and such reverence continues today (Ruback, et al., 2008). Various modern age spa and wellness treatments can be traced back to the ancient Greece and Roman times, which indicates the role coastal environments (although thermal water in a spa is different from a coastal environment) plays as a way of experiencing wellness services in today's world. This very subheading is dedicated to understanding the linkage between certain wellness treatments and coastal areas – in other word water as a medicinal tool.

In classical times, the Greeks preferred baths in fresh water from natural resources and bathing in the sea (thalassotherapy), although bathing was confined to the more wealthy people in private baths but soon public baths were opened. Baths are considered sacred places and were dedicated to several deities (Tubergen and Linden 2002, p. 273). But other examples included the healing properties of thermal springs of the Roman baths at Bath in England (Gesler 1998). Besides highlighting the medical benefits of coastal environments, various studies have also drawn attention to their impacts on broader emotional, mental and spiritual health and the role such landscape plays in rehabilitation, community integration and building social cohesion (Serbulea and Payyappallimana 2012). In ancient times where advanced medical healthcare was developed, the role different landscapes played both in curing and preventing sickness was very paramount unlike now where medicine can be easily fetched from pharmaceutical stores. For instance, a Greek physician who practiced in Rome introduced general hydrotherapy and drinking cures as treatments and also recommended bathing for both therapeutic and preventive purposes (Tubergen and Linden 2002, p. 273).

More recently both environmental and health geographic scholars gave special attention to the importance of environmental landscapes in health and wellbeing (Völker and Kistemann, 2011; Völker and Kistemann, 2013; Wheeler et al., 2012; Koss and Kingsley, 2010). There is a growing body of evidence to support the observation that landscapes can benefit health and wellbeing (Rose 2012). The role hedonism plays in marketing of wellness services in this industry from landscape perspective is vital, as it evokes fantasies, feelings and fun (Holbrook and Hirschman 1982). For instance, the use of images as a way of indicating products and services to potential customers can at times be fictitious and usually they are well-projected to trigger a positive response to purchase a given offer.

Despite a body of evidence that, - everyday visits to the coast were associated with higher levels of stress-reducing, positive emotions (e.g. calmness, relaxation, revitalization) (Natural England 2011 and Wheeler et al., 2012, p. 1), this form of wellness engagement that can be practiced for free where coastal environments are near is hardly valued today. Furthermore, little is known whether travel made

by tourists to coastal environments is associated with the promotion of health and wellbeing or for utmost admiration for the attraction that coastal environments contain. Can the admiration of seashores translate to seeing it as a zone for wellness, quality, health and wellbeing promotion, especially that of mental health-giving elements? Certainly clearer understanding is required in order to shape the view of tourists and society at large about coastlines or seashores (holiday destinations) as to use and promote such places for their health-giving benefits. Some coastal regions are popular for party related leisure space and a great nightlife, for instance Ibiza (off the coast of Valencia, Spain), Mykonos (Greek Island), Aruba (Southern Caribbean Island), Barbados (East of the windward Island of Caribbean Sea), Hvar (Adriatic Sea, Croatia), Florianpolis (Santa Catarina, Brazil). The restorative effects and wellbeing elements of these areas might become confusing as to how it is seen by the general population and the majority of tourists. (Although maybe local people in those places still use the coastline for wellbeing).

According to Tubergen and Linden (2002, p. 275), throughout the ages the interest in the use of water in medicine has fluctuated from century to century and from nation to nation. The medical world has viewed it with different opinions, from very enthusiastic to extremely critical, and from beneficial to harmful. Today, spa therapy is receiving renewed attention from many medical specialties and health tourists, and having a revival. However, the exact therapeutic potential of spa therapy still remains largely unknown. It must be noted that even though certain health benefiting elements might be present across water-based environments, spa (water) therapy are not necessarily same with coastal (water) spa. Below is a table explaining four different types of natural water space and some of their benefit to humans.

Table 1. Type of water environments and their components

Water environment	Components and benefits
Coast (saline water)	 Thalassotherapy, seaweed-based cosmetics, food etc. Swimming in sea-water bring down blood pressure, cures skin disease like acne and helps to get rid of foreign body toxins Contains 83 elements e.g. sodium, potassium, sulphur, magnesium, iodine, iron, hydrogen etc. Provide ample of recreational possibilities Freshand clean air environment Provide natural bathing
Lakes (fresh water)	 Creates complex healthy ecosystem Important for preserving wildlife and helps to keep climate more even Helps nutrient-rich plants and algae to grow Contains nitrogen and phosphorus Support and regulates biodiversity, nutrient cycling, groundwater recharge, waste assimilation and soil formation
Rivers (fresh/clean wate)	 Provide clean drinking water High in the following chemical: zinc, iron, nitrogen, arsenic, metal ores, lead and silver The flow of water in nature make people feel good and positively enhances their mental wellbeing while contributing to stress-reduction
Hot spring (thermal water)	 Rich in mineral content, medicinal properties and high therapeutic use Hot or warm water Geothermally heated underground water

Water is important to the way spas are perceived right from their origin and same as of today, the mineral component of water in terms of health benefits plays a pivotal role in the use of water for treatment. As noted, two types of spas existed: hot springs for drinking and bathing and cold springs for drinking cures only. Coastal areas in this sense are considered as natural spas especially in an area where natural hot springs do exist that offer more health and wellbeing services to humans. At this time, more attention was paid to purging, drinking cures, eating well balanced diets and bathing (Tubergen and Linden 2002, p. 274)

The practice of using water or coastal areas for the promotion of health and wellbeing is as old as that of bathing culture. Various attempts were made to analyze the mineral properties of water, aiming at improving their use in medicine and curative ability. Such efforts paved ways for balneotherapy (medicinal use of thermal water) and hydrotherapy (immersion of the body in thermal water for therapeutic purposes), which Priessnitz and Kneipp pioneered. Taking a step back to 17th and 18th centuries, coastal areas took central stage in providing health services to citizens as doctors and physicians were convinced that for each disease, Mother Nature possessed appropriate medical springs, which could be discovered through chemical analysis of the waters (coastal water) (Tubergen and Linden 2002). As pointed out by Gesler, (1998) various health benefits are associated with specific geographical locations or region, which are described as therapeutic landscapes.

Within the study of therapeutic landscapes, hot springs and water-related areas forms a major sub-theme within such studies (Agishi and Ohtsuka, 1998; Gesler 1998). The studies on non-western approaches to healing through landscapes such as coastal areas and their culturally specific roles in health and wellbeing still need more attention. However, that does not denote the health benefits of water or coastal areas.

Taking a bath in a natural body of water like hot springs do have key functions of maintaining health, prevention and treatment of diseases Agishi and Ohtsuka, (1998) and as noted in Serbulea and Payyappallimana, (2012, p. 1367) the main medicinal uses of hot springs in Japan are for injuries, muscle and joint

complaints, recovery after overwork or disease, and rejuvenation. As noted by Foley (2010, p. 1), human association with water are expressed through geographical places, with springs, pools, rivers, lakes and the sea, all associated with health-giving powers and constituting what may be termed therapeutic landscapes. Therapeutic landscapes are defined as places that have achieved lasting reputations for providing physical, mental and spiritual healing (Kearns and Gesler, 1998, p.8)

Hot springs are also used for healing chronic conditions and symptoms (neuralgia, muscular pain, joint pain and restricted movement, whip syndrome, sprains, digestive troubles, sensitivity to cold, convalescence, recuperation after intense work period. It is important to take note that the use of water as disease prevention, health promotion, rehabilitation and treatment of chronic diseases very much depend on water type and bathing methods (Serbulea and Payyappallimana, 2012). Not to be confused, there are clear differences between coastal water and hot springs, lakes, rivers and pool but they are all good for health and wellbeing.

While various bodies of work like that of (Wheeler et al., 2012; White et al., 2013; Ashbullby et al., 2013; Völker and Kistemann, 2013) in the field of waterscapes in relation to health and wellbeing have shown a number of psychological benefits of coastal areas, little is known about different activities that take place in those setting that might be damaging its ecosystem services. This is to point out that an equivalent amount of attention should be paid for uncovering health improving benefits of coastal environment as well for various engagements that endanger or limit its ability to be a source of wellbeing.

The aquatic environment is perceived to be beneficial to wellbeing, as, regardless of the activity performed, visitors are seen to leave the shore in a happier mood Wyles et al. (2013, p. 60), which correlates with White et al., (2013, p. 48) that natural environments containing a large amount of water were rated more positively for affective reactions and perceived restorativeness. Thus water can be considered as a positive environmental feature while coastal areas as an idea scape for wellness activities knowing that aquatic environments are a frequent aspect of people's favourite place and preferred leisure destinations, (Natural England

2009). Seeing the overlaps in development and urban areas, which is increasingly becoming non-restorative environments, it is understandable that nature in general become a getaway place for recuperative goals and an idea setting for improving one's personal wellbeing with blue/green landscape supposedly the best.

1.4 Coastal Tourism in Relation to Health and Wellbeing

In this subheading, coastal tourism means any holiday travel that falls within the generally accepted definition of tourism made in coastline areas with beaches and a large body of water. While on the other hand, tourism is a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (which may be either tourists or excursionists; residents or non-residents) and tourism has to do with their activities, some of which imply tourism expenditure, (World Tourism Organization, UNWTO).

But there are other ways to view coastal tourism, the concept of coastal tourism embraces the full range of tourism, leisure and recreationally oriented activities that take place in the coastal zone and offshore coastal waters. In this view, these include coastal tourism development (accommodation, restaurants, food industry and second homes), and the infrastructure supporting coastal development (e.g. retail businesses, marinas and activity suppliers) (Hall, 2001).

However, coastal tourism as a major industry is a latest phenomenon Onofri and Nunes, (2013, p. 49) and the development of coastal tourism in Europe and worldwide, starts only at the end of the nineteenth century (Birdir et al., 2013). While coastal areas are revered for their scenic attributes (Tubergen and Linden 2002) and a place for improving health and wellbeing (White et al., 2013), coastal environments are fundamental assets and important resources for tourism (Birdir et al., 2013, p. 279). Beach holidays generate more visits globally and as Birdir et al, (2013) pointed out, beaches are the main reasons for visiting various destinations along the Mediterranean coast. Thus, for tourist seeking fun and pleasure, coastline holiday may seem perfect. One of the popular notions for

coastal tourism is the well-known sun, sand and sex (3S) or rather the (4S) sun, sand, surf and sex (Hall 2001, p. 601). Despite cultural and climatic differences, coastal tourism continue to spread through Europe with tourists from northern part of the continent making holiday to the southern countries where sun and warmth is more present. Coastal areas with their unique environment features became the heart of social life throughout the nineteenth century with spa resorts and grand luxury hotels and leisure facilities, theatres, concert halls and walkways (Onofri and Nunes 2013, p. 49). It can be argued that the development of tourism in general is partly an individual phenomenon steered by the desire to explore and experience the world on the one hand. While on the other hand, the economic context of it may explain the rise of demand for tourism services (Cirer-Costa 2014). This rise in demand of coastal holiday experience makes it, one of the new frontiers and fastest growing areas of the world's tourism industry (Hall 2001, p. 602).

There are debates within both psychological and tourism circles about 'hedonic' versus 'eudaimonic' paradigms of health and wellbeing (McCabe et al. 2010; Hartwell et al. 2013). The hedonic approach focuses on happiness and defines wellbeing in terms of pleasure attainment, and the eudaimonic approach focuses on meaning and self-realization. Wellbeing tourists may aspire to both, although it is recognised that eudaimonic activities may have longer-lasting health and lifestyle benefits. It appears that the coast was originally more about physical wellbeing rather than mental, but now there is more research about the pschological benefits too.

However, the exact figure of coastal tourists is still unknown as it is crucial to have accurate figures regarding the number of visits made to coastline areas alone. Irrespective of the absent of exact numbers, the selling of "sun, sand and surf experiences", the development of beach spa resorts and increasing popularity of marine tourism e.g. fishing, scuba diving, windsurfing, snorkeling, swimming, yachting and other coastal leisure activities - testify the importance of aquatic environment (Hall 2001, p. 602). Notwithstanding, nature is not only for human use, it also requires protection and conservation such that; comprehensive

ecosystem-based management is used to address the needs of both humans and nature (Millennium Ecosystem Assessment, 2005).

As with many other aspects of tourism, concerns over the impacts of coastal tourism on the physical environment and related dimensions of sustainable development have become a substantial interest influencing research on ocean and marine tourism (Hall 2001). The issue of negative impact on coastal environments arising from tourism activities is at one end, while the health and wellbeing benefit is at the other extreme. Onofri and Nunes, (2013) pointed out two alternative reasons for coastline visit; beach lover tourist or/and green lover tourist. In certain cases especially summer season, will the restorative and stress reducing attributes of coastal visits be felt during overcrowding and cross various leisure activities? What is more important is the sustainable use of coastal environments for tourism services and for improving human wellbeing.

It is evident that coastal areas that are used for tourism activities suffers environmentally for instance. According to Hall, (2001), undoubtedly, unplanned and poorly managed tourism development can damage the natural environment, but the overall understanding of the interaction between tourism and the environment particularly within coastal areas is quite poor, with debates over the impacts of tourism development often dealing in generalities rather than the outcomes of scientific research on tourist impacts in a specific environment or on a specific species. This is often because baseline data is unavailable (i.e. research was not done before tourism development, so it is hard to see how far tourism contributed to environmental damage compared to other factors such as human habitation, transport and global warming). As of today, there seem to be no research on understanding impacts from tourism undertakings explicitly on each type of landscape, which makes effective specific protection schemes for the environment crucial.

Pinn and Rodgers, (2005) compared areas frequented by visitors with areas less commonly visited and found that the former had lower levels of biodiversity. While Fletcher and Frid, (1996) systematically manipulated the amount of walking on different communities and found that the abundance of some species

increased whilst others declined as a consequence. Some activities do produce more harmful impacts and Wyles et al, (2013) discuss impacts on the environment and impacts on the visitor; fishing was seen as very harmful whilst swimming was rated as slightly harmful.

Exposure to aquatic environments is beneficial to human wellbeing and marine awareness and at the same time certain activities have specific detrimental effects on marine habitat (Wyles et al., 2013; White et al., 2010 and White et al., 2013). A careful analysis of effects on both coastal areas and on people is very much needed for taking a sustainable path. In this way, risk and benefits for both visitor and the environment can be studied in order to identify those leisure activities that are most beneficial to humans but with low negative impact on (coastal) the environment and to encourage people to engage in them. Conversely, it would also reveal which activities have little benefit to human wellbeing yet considerable costs to the environment, which would then be a guide for management strategies that can protect (coastal) environment and maximize visitor's wellbeing (Wyles et al., 2013).

In conclusion, wellness is a holistic concept of health combining physical, mental, spiritual and social well-being must be maintained as a lifestyle choice to improve one's health and wellbeing especially as overuse and redefinition of the word "wellness" by marketers tend to give often a contrary view. Should wellness be viewed only as a set of service to be enjoyed without inner connection to maintain a lifestyle compatible with its philosophy, it may connote the impression of normal pharmaceutical healthcare services that is delivered mostly by tourism ventures.

Coastal environments as an aspect of therapeutic landscapes that promote human health and wellbeing in various ways is a fresh understanding on how humans can explore the health benefit of nature from a wellness perspective. Coastal environments in themselves irrespective of tourism activities are inherently a setting induced with health promoting benefit. Thus it can be seen as a wellness hub if the coastal area is used for wellbeing by local people, in turn, it is more likely to attract tourists for the same reasons.

The value of water to human existence cannot be overstated and its role in various wellness treatments can be traced back to ancient time when bathing culture became popular among Romans and the Greeks. As Solomon (2010, p. 9) explained the importance of water to human health by saying "it is water that conveys the life force of nutrients and minerals upward against gravity to crops, treetops, and the blood vessels of human beings. It is water that enables the earliest forms of life to evolve and helps create the planet's oxygen-rich atmosphere".

However, from an ecological perspective, wellness can be seen on the one hand, through the environmental dimension (of wellness), while on the other as an induced place for promoting human health and wellbeing. Nevertheless, the issue of unsustainable practice and use of coastal areas for various economic developments may reduce the wellness benefits associated with aquatic zones. The effect of global warming is already at an alarming stage that and this may affect the beauty of coastal environments and extinct various species in the said nature.

With adequate tourism facilities in coastal areas, it is hard not to imagine coastlines as desirable scenery and as idea holiday destinations compared to other type of landscapes. Could it be so that tourists feel better psychologically from holidays to coastal areas compared to other touristic zones, which would further support the argument that psychological health benefits of natural environment (coastal zones)? However, cultural differences and other factors may affect the ways aquatic areas are perceived and viewed in relation to choice when contemplating on a holiday (There are so many cultures that do not sunbathe and some cultures use the beach like a park or playground, e.g. in India and Nigeria). Also, a range of factors can prevent engagement with coastal areas, lack of access, concerns over safety and lack of awareness about its health benefits can deter people from using nature to alleviate stress and other related illness.

This chapter was discussed from three interrelated subtopics of wellness in the context of coastal areas, coastal wellness and coastal tourism in relation to health and wellbeing. Starting from the conceptualization of wellness, the environmental

dimension of wellness was used to explain the connection of wellness to coastal environments and coastal wellness. Coastal areas were further used to indicate their relation to human health and wellbeing from the perspective of coastal tourism.

The following chapter focuses on coastal environment in relation to health and wellbeing and is discussed with the two subheading of: importance of coastal environments, and the health benefit of coastal areas.

2. Theoretical Approach to Coastal Environment in Relation to Health and Wellbeing

2.1 Importance of Coastal Environments

There are multiple definitions of coastal environments. Coastal areas are commonly defined as the interface or transition areas between land and the sea, including large inland lakes (Unite Nations Environment Programme. UNEP-WCMC). However, Hinrichsen, (1998) refers to them as that part of the land most affected by its proximity to the land, while the European Commission for integrated coastal zone management (1996-1999) added to it as a strip of land and sea of varying width depending on the nature of the environment. Just as definitions of coastal zones are slightly different, so is it when thinking of its geographical boundaries. In a review made by the European Commission for integrated coastal zone management, it was noted for instance, that in Denmark in their (Planning Art 1991), defines the landward boundary of coastal zones as a 3 km inland from the coast and the seaward boundary as the shoreline (Policy Alternatives Impacts on European Coastal Zones Report 2011). In the same review, it was pointed out that Spain under the (Shores Act 1988), considers the landward is up to 200m from inland limit of the shore while the seaward is same as in Denmark.

However, for the purpose of this paper bearing in mind the use of coastal areas for leisure, recreational, tourism activities and their attributes for health and wellbeing improvement, other water-based landscapes, which are viewed to include ocean, river, beach, coral reefs and mangroves, wetlands, fjords and barrier island areas are brought into this context. In some cases, coastal areas are classified by their

geological composition, stability of the soil, as well as the degree of rocky materials Prasetya (2007) and they are as follows:

- Cliff coast are classified as hard coast due to their resistant materials such as sedimentary or volcanic rocks. This type of coast typically has a short shore platform that usually exposed during low tide.
- Clayey bank coast can be classified as semi-hard coast, consisting of cohesive soils: it is common on estuarine coastlines and often has nearly vertical banks ranging from one to five meters in height. It is composed of weaker and less resistant material.
- Intertidal/muddy coast is characterized by fine-grained sedimentary deposits, predominantly silt and clay that come from rivers; it can be classified as a soft coast. It has a broad gentle seaward slope known as an intertidal mud flat where mangrove forest, saltmarshes, shrubs and other trees are found.
- Sand dune coast consist of unconsolidated material, mainly sand, some
 pebbles and shells; it can be classified as a soft coast due to its gentle
 seaward slope known as dissipative beaches that have broad fine sand and
 gradually steep slopes at the backshore/fore-dunes.
- Sandy coast consist of unconsolidated material, which are mainly sand from rivers and eroded headlands, broken coral branches and shells from the fringing reefs. It can be classified as a soft coast with reef protection offshore, and its beach slope varies from gentle to steep slopes depending on the intensity of natural forces (mainly waves) acting on them. Coconut trees, hibiscus tiliaceus, Pandanus, pine trees and other beach, woodland trees are common to them.

According to Cohen et al., (1997), 20 percent of the world's population lives within 30km of coastal areas and nearly double that number live with the nearest 100km of it. And the population density is close to 100 people per square kilometer in year 2000 (UNEP). This indicate that coastline is vast space geographically in estimate, a total global coastline exceed 1.6 million kilometers and coastal systems occur in 123 countries around the world as complex patch

work of habitats – aquatic and terrestrial (Burke et al. 2001). Nonetheless coastal system can be divided into subtypes, namely: estuarine, marshes and lagoon, mangroves, intertidal habitat, delta, beach and dune (Burke et al. 2001).

- Estuaries are areas where fresh water of rivers meets the salt water of oceans, which are highly productive, dynamic, ecologically critical to other marine systems and valuable to human, with a measurable variation of salinity due to the mixture of sea water with freshwater (Hobbie 2000). According to Alder (2003), there are some 1,200 major estuaries worldwide, including lagoons and fjords account for approximately 80 percent of the world's freshwater discharge.
- Marshes and lagoons are extension of true estuarine and together regardless of location, play key role in maintaining hydrological balance, filtering water of pollutants and providing habitat for birds, fish, mollusks, crustaceans and other kinds of ecologically and commercially important organism (Burke et al., 2001).
- Mangroves are coastal area with trees and shrubs found in intertidal zones and estuarine margins that have adapted to living in saline water, either continually or during high tides. Mangrove areas are found in both tropical and sub-tropical environment and currently covers an estimated 16 18 million hectares globally (Valiela et al. 2001).
- Intertidal habitats, deltas, beaches and dunes these are areas that provide ecosystem services such as food, shoreline stabilization, maintenance of biodiversity (especially for migratory birds) and recreation and are important source of food for humans (Burke et al., 2001).

Of all coastal subtypes, estuaries and marshes support the widest range of services and may be the most important areas for ecosystems services, which act as the most important processes in the mixing of nutrients from upstream as well as from tidal sources, making estuaries one of the most fertile coastal environments (Burke et al., 2001). Furthermore, there are many more estuarine-dependent species than estuarine-resident species, and estuaries provide a range of habitats to

sustain diverse flora and fauna Dayton (2003). Estuaries are particularly important as nursery areas for fisheries and other species, and form one of the strongest linkages between coastal, marine, and freshwater systems and the ecosystem services they provide (Burke et al., 2001). Coastal areas and their systems are crucially important to mankind as to provide food, medicines, freshwater storage and retention, atmospheric and climate regulation, human disease control, recreational space and aesthetic attraction that in turn support the health and wellbeing of individuals and other living organisms. A sustainable approach is thus needed in regulating and managing coastal environment against negative impacts that are induced by humans or by natural force.

2.2 Health Benefit of Coastal Environments

Exposure to natural environments can help restore depleted emotional and cognitive resources Kaplan and Berman, (2010), and that compared to urban scenes, sounds and experiences, green spaces such as parks and woodlands, and blue spaces such as rivers and the coast, can help recharge people's attentional capacities (White et al., 2013). Also, that spending time in natural environments reduces psycho-physiological stress (Ulrich et al., 1991) and enhance positive affect (Coombes et al., 2010). Furthermore, natural environments are increasingly being considered as key settings for health promotion (DEFRA, 2011) and it has been argued that adults undertake increased physical activity when they have access to natural environments Coombes et al., (2010), which is good for health and wellbeing.

According to Völker and Kistemann (2011), water (ocean, river, and coast) is one of the most important physical, aesthetic landscape elements that provides health and wellbeing to humans. However, in environmental psychology, more attention has been given to landscape design, and tourism research, but the relationship between water and health in current literatures is only investigated in the field of environmental toxicology and microbiology, not explicitly in the research field of blue space and human wellbeing (Völker and Kistemann 2011). Thus Lianyong and Eagles (2009) criticize the inattentiveness of academics towards waterscapes and display a strong connection between waterscapes and environmental health.

However, the works of Ashbullby et al., (2013); White et al., (2013); and Wheeler et al. (2012) gave specific attention to the relationship between waterscape and human wellbeing.

Before pointing out the health and wellbeing benefits associated with coastal environments, the non-representational idea of "affect" is employed as a study framework, indicating how wellbeing arises initially as an energy and intensity through the physical interaction of human bodies and non-human objects, and is experienced as a feeling state. Thus the following discussion below by Andrews et al., (2014) is used for explaining the process by which humans are affected by coastal environments. What energy is not absorbed or reflected by the earth's atmosphere travels through it, refracting on the way. Energy is then either absorbed or witnessed (felt and seen) by human bodies directly (as heat and light) or else is absorbed or reflected by objects and then absorbed or witnessed by human bodies secondarily (Andrews et al., 2014).

In terms of initial human experience, particles in the body itself (such as molecules in the brain, neurotransmission and nervous system) begin to respond and sense things visually and tactilely. Sound on the other hand is structured and delivered by sound waves; longitudinal pressure waves produced by a vibrating source which causes air molecules to be disturbed, move and bounce off each other. The resulting pulsating motion of air then travels; the sound heard being the variation in pressure picked up by biological molecules in the human ear. Sound waves vary in frequency (number of back and forth vibrations in a given unit of time), whilst the sensation of this frequency is heard as pitch (whereby the higher the frequency of the wave, the higher the pitch), (Andrews et al., 2014).

Musical sound waves - themselves often created, mixed and amplified by technologies - in particular possess certain characteristics. Whereas basic non-musical noise is a mixture of frequencies with no mathematical relationships

The constant presence of these fundamental and basic processes mean that clearly the person is not always the beginning; center and end of the human experience, and that much larger physical forces are forever and affectively at play (McCormack 2007). They impact on individuals before they are consciously aware, can react and make sense, and constantly form and move along the materiality of daily life (McCormack, 2007). For example, an individual visit a water-based landscape to take some photographs, but upon arriving there, see the ample of opportunities to do sports with everyone there having fun doing one sport or the other, without thinking, he/she joins others for some activities and starts to feel energetic.

One could suggest that such idea is that which replaces stress with harmony, anger with peace, despair with hope and isolation with community (Andrews et al., 2014). An individual should take active steps in having a balance between the three primary dimensions of living (physical, mental and social). Indeed, as McCormack, (2007) explains, events and encounters are not just interpersonal, they are molecular and in ways that are also implicated in barely tangible transformations of sense and sensibility. They are essential ingredients in life, coming prior to anything else in life, and thus they are essential components of a situated sense of wellbeing (McCormack, 2007).

On this same matter, Pile (2010) offers a much more comprehensive explanation of earlier brief observations on the relationships between affect and human cognition, describing a three layer model that maps the order and relationship between affect, feeling and emotion.

- The first layer is non-cognitive affect; the purely physical interactions and resulting energies that occur within assemblages of bodies and objects (here humans, like all objects, are neutral, ahistorical, universal and integrated (Pile 2010).
- The second layer is a less-than-fully conscious affective feeling state; how these physical interactions are tacitly, intuitively picked up, yet not consciously registered or expressed (Pile 2010).
- The third layer is fully-consciously felt and known emotion; the way
 affective feeling states are later fixed on or compared to established social
 categories and personal experiences, and expressed. (Pile 2010) claims that
 a straightforward one-way movement typically occurs between the first,

second and third layers (whether involving fractions of seconds or longer), that the first and second layers can occur without the third, but that no leaps can occur over the second.

Thus, where environment is concerned, affect is necessarily a forerunner to and influence on their emotion, emotion partly reflecting recognition of their affective state (McCormack, 2007). As stated by the same author, the pre-cognitive affective state creates the potential for later cognitive thoughts, feelings and emotions. Notably, the idea of an affective state of wellbeing being a less-thanfully conscious and pre-emotional form of cognition is also critical how wellbeing might arise in everyday (coastal), natural or general environments (Andrews et al., 2014). This is to say that affect delivers wellbeing regardless of an individual's particular personal knowledge of, or history with, the place which they are occupying in any given moment, and regardless of whether the place fits social categories traditionally associated with wellbeing (such as retreats, spas, natural landscapes, holiday destinations, particular caring environments etc.) or not. This means it is challenging to research as the recipient of wellbeing may not even realize what has happened. Preferably then, research must uncover how people feel before and after visit to coastal places to ascertain the level of wellbeing received.

In an overlapping social and economic development that often brings unwanted outcomes to human health and wellbeing coupled with the trend of more people moving to urban space for better opportunities, frequent exposure to natural environment decreases, which result to increase in health related problems. A visit to coastal space whether aware of it or not brings about lower mental distress, higher mental, and reduce mood disorder, such as anxiety and depression (White et al., 2013). However this is not to say that such health benefits have any effect on overall life satisfaction but there could be a relationship. In addition, the benefits of living near the sea appear more strongly associated with reductions in negative outcomes (e.g. mental distress) than increases in positive ones (e.g. feelings of well-being) (White et al., 2013). An indication that may explain difference in level of health benefits that might be derived based on frequency of

visit and also a possible suggestion that the degree of effect absorbed from waterscapes may vary according to the background of visitors. In a research carried out by Natural England (2011) every day visits to the coast were associated with higher levels of stress-reducing, positive emotions (e.g. calmness, relaxation and revitalization than the ones made to urban parks or open countryside. In positions of social connections, suggestion emerged that visits to the beach may be above all good for promoting and enhancing family relationships (Ashbullby et al., 2013). And furthermore, coastal environments seem to encourage a number of health and wellbeing promoting behaviours and people who live near the coast are more likely to make use of these opportunities (White et al., 2013).

As the work of Solomon (2010) pointed out, among water's indispensable qualities is that it is Earth's only self-renewing vital resource. Evaporated water precipitates in a desalinated and cleansed form over the planet through Earth's continuous water cycle to restore natural ecosystems and make sustained human civilization possible.

In conclusion of this chapter, coastal (waterscape) areas are mostly eye-catching (also activity spaces for sunbathing, swimming, walking and watersports) features of landscapes and this may explain why there are more tourism developments in those environments. Whether tourists understand the health benefits associated with coastal environments or not, it is hard for any to deny the soothing attributes of nature particularly in coastal areas. But then, such a calming feeling might be hampered in the case of overcrowding or poor maintenance and improper development which is very common in many beach resorts.

In the study of attention restoration theory (ART), it has emerged from different authors in that field of study that the restorative quality of natural environments derives from their ability to offer soft fascination which captures people's attention in an effortless manner, allowing executive systems that regulate directed attention to rest. This view is also clearly expressed in sub-aquatic environments with good visibility and high biodiversity without immediate threats to have same potential as demonstrated in large aquariums. To explain further,

ART identifies three additional features of environment that can help the switch from voluntary (effortful, directed) attention to involuntary (effortless) attention and facilitate restoration, namely "being away", "extent" and "compatibility". Being away reflects the feeling that one is away from every day, familiar and mundane setting and clearly this is true for sub-aquatic environments for most people (White et al., 2013b, p. 5).

Health and wellbeing can be understood from various perspectives but from an environmental viewpoint, more specifically in coastal settings, more understanding is still required to uncover more health and wellbeing benefits. The restorative, stress-reducing, improved positive mood, stimulation of brain activity and memory, personal satisfaction, feelings of enjoyment, connection to place and some more attributes that are associated with coastal areas is very importance for maintaining human and wellbeing.

The three primary dimensions of life (body, mind and spirit) approach to understanding human health is paramount to taking preventive steps towards personal wellness and living in profound harmony that shut the doors to certain health problems like stress and depression. This understanding can as well lead to better use of coastal areas in a sustainable manner whereby preservation and protecting of marine environment is managed in a manner that encourages humans to continually respect such space for its health giving values. Although, visitors are not responsible for the management, but they can act more respectful. In this way, coastal tourism development and activities should be designed to soothe and enhance tourist health and wellbeing while maintaining local's privilege to enjoy the same possibility. One major trend concerning many beach resorts which are heavily touristed is that young local people rent out their flats while they travel out for holiday.

Finding a place to cool off, relax, recreate and recover from the burden of every day is an aspect that needs to be recognized with seeing how beneficial it is to humans' health and wellbeing. Such recognition need to be included in various future environmental projects especially in designing places that can produce the same or similar health enhancing attributes that are derived from coastal space.

3. Research Outcome and Discussions

3.1 Research Method and Samples

Bearing in mind the aim of this thesis - which is to understand the views of individuals about coastal environments in relation to human health and wellbeing. A quantitative research method was employed by using a self-administered questionnaire, which includes both mainly close-ended questions and a few openended ones for the purpose of understanding the underlying reason for a given response. The close-ended question included multiple choice and itemized scale with endpoints of "strongly disagree" and "strongly agree". In this way, respondents were asked to indicate their degree of agreement by checking one of five response categories.

Questionnaire enables quantitative data to be collected in a standardized way so that the data are internally consistent and coherent for analysis. It also ensures comparability of the data across respondents, increases speed and accuracy of recording, and facilitates data processing. On the contrary, questionnaire items may not have the same meaning to all respondents and the format of design makes it difficult for the researcher to examine complex issues and opinions. Even where open-ended questions are used, the depth of answers that the respondent can provide tend to be more-limited than with almost any other method of research. This makes it difficult for a researcher to gather information that is rich in depth and details (Malhotra, N. K. 2004).

Open-ended and close-ended questions differ in several characteristics, especially as regards the role of respondents when answering such questions. Close-ended questions limit the respondent to the set of alternatives being offered, while open-

ended questions allow the respondent to express an opinion without being influenced by the researcher (Foddy, W. 1993). This has several consequences for the quality of survey data. The advantages of the open-ended questions include the possibility of discovering the responses that individuals give spontaneously, and thus avoiding the bias that may occur in the case of close-ended questions. However, open-ended questions also have disadvantages in comparison to close-ended, such as the need for extensive coding and larger item non-response. In addition, as documented many decades ago by Lazarsfeld P. F. (1944), in questionnaire design, open-ended questions can be used to explore deviant responses to close-ended questions.

The samples used for this quantitative research are students and teaching staffs of HAAGA-HELIA University of Applied Sciences (UAS), Helsinki Finland. In addition, a few students of University of Tartu Pärnu College, Estonia were also sampled. More than the convenience of access, the chosen sample share similar geographical landscape and both educational institutions offers tourism related courses. For example, Reinart et al. (2002), found that lakes and coastal waters in Estonia and Southern Finland are in five optical classes of waters: clear, moderate, turbid, very turbid and brown. Also, Pärnu beach is well-known seashore recreation and holidays along with sunbathing which is favoured by Estonians as a fashionable and healthy summer-time activity (Kask and Hinsberg 2012).

The sampled group are male and female, ranging from 20 to 60 and above years old with an interval of a decade between age categories, for example, 20 - 29, 30 - 39 till 60. The sampled group is overrepresented by students and respondents under 30 years old. Another baised factor of the sample is that the number of female respondents is much higher to their male counterpart. Thus, it can be said that the data collected do not accurately represents both gender and all age categories. In order to ensure that respondents' retention about their experience of coastal environments is somewhat fresh, it was indicated that only those that have visited coastal areas and other water-based areas in the past 24 months are allowed to respond to the questionnaire.

There were a total of 20 questions in the questionnaire that must be answered by respondents. The first four questions were about respondent's gender, age category, when the last respondent has visited coastal areas and other water-based environments with the option of 12 and 24 months, and whether the respondent currently or have lived less than 3 kilometres away from a coastal environment at some point in their life. The next two (5 and 6) were to identify the respondent's motivation for visiting coastal areas and their opinion about the said environments by providing multiple choice answers and possibility for other option. Respondents were allowed to choose more than one response choice for question number five (5).

Likert scale response categories where the respondent can only check one of five responses (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree) as to indicate the degree of agreement to a given statement was used from question 7 to 14 of the questionnaire. The first three questions in this section are explicitly for understanding the (objective) physical benefits of coastal environments while the other five is to recognise (subjective) emotional health benefits from same environment.

For question 15, multiple choice responses of six, which allow respondents to select the top three elements of coastal environments that are perceived most beneficial to health and wellbeing. In addition to the multiple choice responses, an option was also provided for respondents to freely specify other elements that they perceive as most beneficial to health and wellbeing. Unlike the previous with multiple choices of six, a very close-ended question was used for the next (question 16) one, which ask whether respondents know that coastal environments are good to their health and wellbeing. To answer this, respondent could only tick a yes or no.

However, seeing that a simple yes or no does not reveal much about question 16, an open-ended question was used in the next one asking respondents to give reason(s) based on their answer to the previous question. In a similar fashion, the next question (18) was also an open-ended one, which asked respondents to say in what ways coastal environments influenced their health and wellbeing based on

personal experience of the said landscape. As this is the only open-ended question among others without any link to a previous response or question, question 18 was designed this way to give room for respondents to share their health and wellbeing experience of coastal areas, which may have to do with subjective or/and objective elements of the landscape. In general, open-ended questions provide richness of detail and may reveal areas untapped. It also reflect education, values, attitudes and beliefs of the respondent (Kendall and Kendall 2002). Open-ended questions can bring about factual information, help to expand a list, explain a prior answer, establish knowledge and clearify terminology (Janice 2011).

The last two (19 and 20) questions are asked in that way where the first one is asking respondents to choose among given multiple choices with an option to specify other choice, which water-based environment they find the most attractive for leisure and wellbeing. While the other, which is an open-ended question was to give a reason for whatever choice a respondent chooses, as to give justification for the initial response to the previous question 19. For more clarification concerning the questions used for the research, (please see appendix 1).

The questionnaire was designed using an online survey tool called "Survey Monkey" which is user-friendly and only allows respondents to respond once completed without possibility for a second time. The said online tool also provide possibilities for basic statistical calculations and options to export data as PDF and Excel file. The survey was distributed to target sample via electronic mail (email) by attaching the weblink of the questionnaire to a brief introductory message about the author of this thesis and the purpose of the survey. Also, hard copies were printed specifically for teaching staff, but were used as well for some students at two different campuses of HAAGA-HELIA University of Applied Sciences. Eventually, responses derived through hard copies were added manually to the ones from electronic means.

The survey was carried out from the 3rd to 16th of March 2014 and a total of 145 respondents answered the questionnaire. Only 13 respondents did not answer all the questions, especially the open-ended ones.

3.2 Research Outcome and Analysis

Out of a total of 145 respondents, the number of male respondents is less than half of their female counterpart with respective percentage 28.28% (41) and 71.72% (104). The obvious reason for female respondents out-numbering their male counterpart is due to the fact that there are more female students in HAAGA-HELIA UAS and it will be a difficult task to get as many male respondents to female ones in the mentioned academic institution. Thus, it was not the choice of the author that produced this outcome.

The number of respondents between the age category of 20 - 29 is way more than any other age groups in the sample. Second is the age group of 30 - 39, followed by 40 - 49 and 50 - 59 with just one respondent who is 60 and above years old. This is so due to the fact that the majority of the respondents are students with a few teaching staff. Below is a bar chart of age category, number of gender and total respondents.

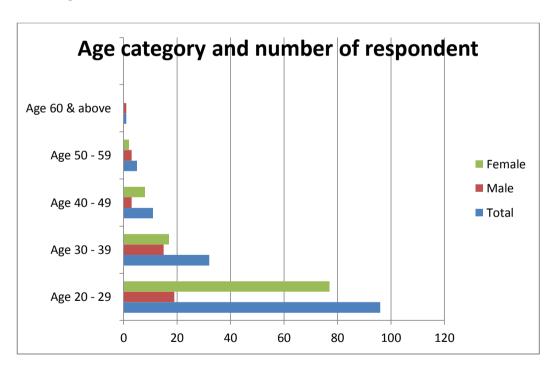


Figure 1. The bar chart of age category and number of respondents.

As indicated in the above figure, the number of respondents is less as the age category increases. As much as 96 out of the total number of 145 respondents are in the age category of 20 - 29 years old, which represents 66.21 percentages of the

respondents. In this age category, 77 of out the 96 respondents are female while only 19 of them are male. The next age category of 30 - 39 years old represents (32 individuals) 22.02 percentages of the total respondent, which is the second highest in all the categories. In this age section, female respondents are not so dominating like in the first age group with the margin of two individuals, which is 17 and 15 respectively for female and male. The other age categories will not be discussed further as there just a few respondents. The difference in gender and age groups makes cross-tabulations difficult (e.g. to highlight differences in responses between male and female.

Nearly all respondents of the questionnaire have visited coastal environments and other water-based areas like rivers, lakes during the past 12 months. Only 8 respondents, which represent 5.52 percentage, have visited the said environments during the previous 24 months. Also, 117 out of the total 145 respondents testified that they live or have lived less than three kilometres away from a coastal environment and other water-based areas at some point in their life while 28 individuals do not or have not lived in the said environments at some point in their life. The geography of the countries in question may be the main reason for this outcome. In Finland, it is a common family tradition to have a summer house or cottages very close to lakes and this trend somehow can be said to have manifested itself in this survey.

The motivation for visiting coastal environments do vary for different people as responses to this question during the survey proved. Also, an individual may (usually) have more than one motivation for visiting coastal areas especially at different times of the year – beach tourism is highly seasonal. Concerning the question, what is your motivation for visiting coastal environments? A multiple choice responses of "for fishing, for sports recreation e.g. water sports, for sunbathing, for walking or jogging and other" (please specify) were given allowing respondents to choose more than one response. Below is a table indicating answer choices and responses generated by each choice to the question discussed under this subheading.

Table 2. Motivation for visiting coastal environments.

Responses (times)
11
42
85
98
24

As indicated in the above table, the top three motivations for visiting coastal environments are: "for walking or jogging" produces more responses, followed by "for sunbathing" and "for sports recreation" while "for fishing" generated a few responses.

Respondents specified other answer choices which have some relation to the response options given, such as: water-ski, doing sports, sunbathing and walking altogether, sport-shows, swimming and sailing and watching the sunset. However, the following are the host of reasons respondents gave as to why they visit coastal areas: "Visiting family and friends, smoking by the ocean, relaxing with friends, for fresh air and to enjoy beach area, boat trips, to stare at the ocean, for sightseeing and relaxing seeing sunset, meditating, summer cottage, nice environment, partying with friends, barbequing, for breathing in the ocean air, to relax, to admire the sea, for soothing and relaxing water, spending time (such as reading, drawing and contemplating), for relaxing and clearing mind from stress, cuisine and relaxing holidays, just for having good time and cycling at the coastline".

In relation to health and wellbeing, walking or jogging on the beach and swimming in coastal waters can be more benefiting as such activities is very likely to have positive effect on nearly all parts of the body. Swimming in general is very good for building cardiorespiratory health and jogging improves cardiovascular fitness and both physical activities helps to maintain healthy weight. On the other hand, correct amount of sunbathing can also be linked to health but humans in most cases do not have the lack of passive activities. Rather, humans are more and more becoming deficient of recommended amount of physical activities which is one cause of some healthy challenges.

In respect of coastal environments as a place for promoting human health and wellbeing, these hosts of motivation for visiting the said landscape purely indicates that some respondents knowingly or unknowingly benefited from coastal area health-wise. In total, 24 respondents ticked the "other" (specify please) response option and 13 out of that number specified "relaxation, relaxing, to relax or to rest" as one of their motivations for visiting coastal areas. However, relaxation is not always healthy if it involves cigarettes, alchohol, extreme sunbathing or other health-limiting practices.

Bearing in mind the goal of this thesis, the author didn't give attention to all the other (irrelevant) motivations that some respondents indicated which are not particularly connected to coastal environments in terms of promoting human health and wellbeing by presenting those reasons that can be considered under the frame of this topic. Thus, only the following responses are categorized as health and wellbeing related motivation for visiting coastal areas: for relaxation, for breathing in the ocean air, for meditating, for soothing and relaxing water, for enjoying ocean views and sunsets, for clearing the mind from stress and for enjoying quality time. This outcome can be linked to Kant's theories of aesthetics which states that "aesthetic pleasure is not based on the principles of our will but the connection between the beautiful and the feeling of pleasure that we take from a beautiful object".

Below is a bar chart of male, female and total responses for each choice answer to the question of "what is your motivation for visiting coastal areas.

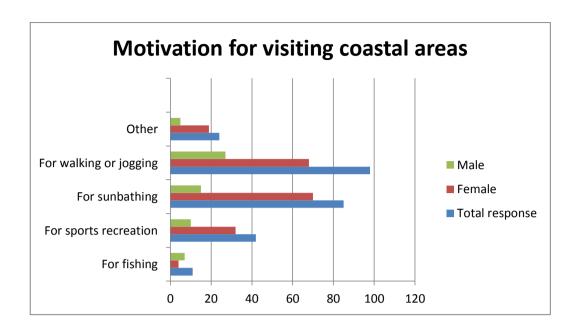


Figure 2. Motivation for visiting coastal environment according to responses by gender.

From the above bar chart, respondents' top three motivations for visiting coastal areas do not vary between male and female in terms of preference to answer options. However, although there were few male respondents in the survey, the number of male respondents whose motivation for visiting coastal environments is "for fishing" surpasses their female counterpart. In percentage calculation per response choice by gender, 30.77% of female and 24.39% of male responses indicated "for sports recreation" as one motivation for visiting coastal environments. While the number of response choice "for sunbathing" is significantly higher to the male response choice. However, both gender tallies with "for walking or jogging" as motivation for visiting coastal areas. In order to explain further, a computed percentage calculation of responses to answer choices by gender is described in the table below.

Table 3. Percentage calculation of response choice by gender.

Response choice	Male	Female
For fishing	17.07%	3.85%
For sports recreation	24.39%	30.77%
For sunbathing	36.59%	67.31%
For walking or jogging	65.85%	65.38%
Others	12.20%	18.27%

Concerning respondents' opinion about coastal environments, 51.7% of total respondents say coastal areas are more relaxing than any other landscapes, while 20.8% indicated that the said environment is more beautiful than any other landscapes. Also, 14.7% of all respondents' opinion of coastal environments is that "it is a healthier environment than most other landscapes and only 8.9% think that it is more of a place for tourism activities than any other landscapes. In addition, 3.9% indicated other opinion, which some of them can be classified under the response choice, such as "a place to just relax and it is just the closest relaxing environment available. However, some respondents also point out other interesting opinion about coastal environment, which is as follows:

- It is the most refreshing environment
- It is a place of freedom and fresh air
- It is an environment most suitable for contemplating and meditating (interesting)
- It is an environment to feel the smell of sea and flora

There are no substantial differences in opinion between female and male regarding to the response options as 51.4% and 53.1%, respectively say coastal environment is more relaxing than any other landscapes. Whereas 13.8% of female and 16.3% of male think coastal areas are a healthier environment than most other landscapes, 9.3% and 8.2% in the same gender order consider the said

space as more of a place for tourism activities than any other landscapes. Furthermore, both genders are quite even in opinion with 20.9% of female and 20.4% of male that say coastal areas as more beautiful place than any other landscape.

This part of the survey is based on Likert scale questions which are divided into two sections and they will be analyzed by indicating the degree of agreement respondents give to each question in this category. The first section of this category is based on subjective health and wellbeing benefits of coastal areas, while the second part is constructed on objective health and wellbeing benefits of the same environments.

In the first section, response to the subsequent questions are analyzed: "(1) I enjoy the benefits of the fresh sea air when I am at the coast, (2) I feel more active when I am by the coast and want to do more sports and fitness activities, and (3) I feel more passive at the coast and just want to lie down and relax.

Table 4. Number of respondents with level of agreement or disagreement to the subjective health and wellbeing benefits of coastal areas

Scale option	Question 1	Question 2	Question 3
Strongly	84	20	10
agree			
Agree	50	61	40
Neither	7	50	53
agree nor			
disagree			
Disagree	1	11	32
Strongly	2	2	9
disagree			

Based on respondents' answers to the first question -58.33% strongly agree, 34.72% agree, 4.86% neither agree nor disagree, 0.69% disagree and 1.39% strongly disagree, that they enjoy the benefits of the fresh sea air when they are at the coast. To the second question, respondents' answers are -13.89% strongly

agree, 42.36% agree, 34.72% neither agree nor disagree, 7.64% disagree and 1.39% strongly disagree, that they feel more active when they are by the coast and want to do more sports and fitness activities. While to the third question, answers from respondents are so that -6.94% strongly agree, 27.78% agree, 36.81% neither agree nor disagree, 22.22% disagree and 6.25% strongly disagree, that they feel more passive at the coast and just want to lie down and relax.

For the second part of the Likert scale questions, the following questions are asked: "(1) being in a coastal environment generally makes me feel happy, (2) I often walk on the beach to clear my head so I can think more clearly, (3) I go to the beach when I am sad or depressed and it makes me feel better, (4) I have more fun on the beach with my friends than in other landscapes, and (5) If I am stressed, going to a coastal environment calms me down." In order to give a clear understanding of responses to all the above questions, a table is presented with the respondents' degree of agreement or disagreement.

Table 5. Number of respondents with level of agreement or disagreement to the objective health and wellbeing benefits of coastal areas.

Scale	Question	Question	Question	Question	Question
option	1	2	3	4	5
Strongly	44.44%	15.97%	10.42%	7.64%	10.42%
agree	(64)	(23)	(15)	(11)	(15)
Agree	49.31%	43.75%	32.64%	25.69%	65.28%
	(71)	(63)	(47)	(37)	(94)
Neither	3.47%	24.31%	38.89%	45.83%	19.44%
agree	(5)	(35)	(56)	(66)	(28)
nor					
disagree					
Disagree	0.69%	13.89%	15.97%	20.14%	3.47%
	(1)	(20)	(23)	(29)	(5)
Strongly	2.08%	2.08%	2.08%	0.69%	1.39%
disagree	(3)	(3)	(3)	(1)	(2)

As the research outcome indicates that being at the coast can generally make one feel happy, that walking in these environments can result in people thinking more clearly, when sad or depressed being there can bring about better feeling and if stressed, going to coastal space can calm down anxious pressure. In this way, coastal destinations have new tasks of managing visitor's experience in manner that will not limit these set of health benefits. In this case, incorporating all these health and wellbeing benefits into other services that some (coastal) tourism establishments (e.g. thermal spas) offers as to better improve the health and wellbeing of clients can be seen as one way to enhance visitors experience. Also, this result above confirms previous research by White et al. (2013) which states a visit to coastal space whether aware of it or not brings about lower mental distress, higher mental, and reduce mood disorder, such as anxiety and depression. Perhaps, this is one reason why some researchers claimed that people that live 3 km nearer to coastal places are more healthier than those that live in cities. Although, the congestion and lack of other natural environments in cities can directly or indirectly cause stress to people living there.

Respondents were asked to select the top three elements of coastal environments they perceive most beneficial to health and wellbeing from the following options: (1) swimming in water, (2) walking on beach sand (pebble), (3) ocean sound, (4) flora and fauna, (5) sunshine, (6) fresh air and (7) others. Fresh air and sunshine came first and second respectively while ocean sound and swimming in water both tied for third choice as the top three elements of coastal environments respondents perceive most beneficial to health and wellbeing. However, "walking on beach sand (pebble)" almost received the same amount of preference with those two choices that tied for the third most preferable elements, but both "flora and fauna was the least favoured. As noted before by (DEFRA 2011), natural environments are places to get some fresh air and to exercise, which is in-line with this result.

The responses that five females and one male respondent gave as "other" preference that was not listed in the options given are: beauty view, watching the water, the infinity factor of ocean, socializing and the smell of the sea and flora.

There is no obvious variance between female and male preference across the response choice except that, more female respondents preferred the element of sunshine than their male counterpart while it is the opposite for "walking on beach sand". Below is the figure explaining respondents' preferred elements of coastal environments.

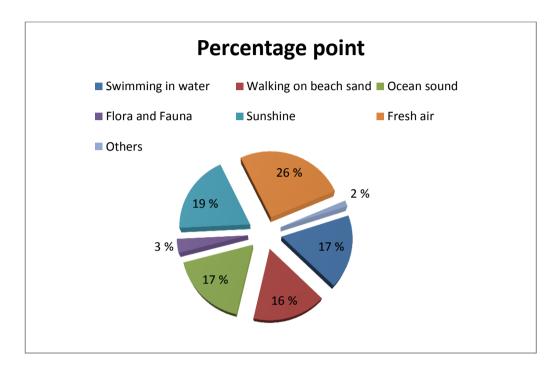


Figure 3. Percentage point of preferred elements of coastal environment.

The majority of total respondents said they know that coastal environments are good for their health and wellbeing – 84.4% answered yes and 15.6% no. Majority of those respondents that answered "no" did not give reason or simply commented "I don't know" when asked "why do you think this is the case." However, a few think it is due to the fresh air and relaxing feeling that one derives from the said landscapes that makes it good for health and wellbeing.

Conversely, those respondents that responded that they know that coastal areas are good for health and wellbeing gave interesting reasons why this is the case and many consistently provided similar explanations, that because of the fresh air and the relaxation elements associated with these environments. In fact, the statement "fresh air" is stated more than 50 times as why respondents think that aquatic landscapes are good for health and wellbeing, which is maybe supporting why,

among other response choice, "fresh air" came out as the number one preferred element of coastal environments that is perceived most beneficial to health and wellbeing.

Other thoughts aside from the element of fresh air and relaxation generated by respondents are that the sea air is good for respiratory problems like asthma due to its saltiness and that coastal environments with its fresh air, water and ocean sound produce calmness that is good for mental health. Some minerals that come somehow from ocean/sea, coupled with seafood are good for health and coastal environments are usually beautiful with lush vegetation that is aesthetically pleasing, calming and reduces stress. It is big and spacious area and quiet that opens a person's mind and takes one further, which is good for mental health, but also, seeing that it is a place with fresh air and open space unlike cities help people to relax, calm down and feel better. It is also so that coastal areas are good for the eyes (staring out to sea on the horizon), which make people feel better and happier and being that the area generally is less polluted than cities or towns should make it a good place for health and wellbeing.

Still in continuation with respondent answers why coastal areas are good for health and wellbeing, some point out that many sports and recreational activities such as swimming and jogging can be carried out in aquatic areas, the environment provides opportunity to spend quality time with family and friends and to stay away from computer and television, and since many people forget to relax and always on the move, coastal areas generally serve as a reminder to slow down because of the fresh air being in water and the relaxing effect. One might feel more active at the beach and partake in activities such as walking, playing games and so on.

Furthermore, as stated by respondents, since coastal environments are nature, nature is good for human health and because water brings freshness to the air that one breathe and also people feel more relaxed and they forget their worries for a moment as it appears that the area let one to clear his/her head and to organize thoughts. It is so that one feels fresher and relaxes better in that environment when water is clear; to swim in coastal water is healthy and relaxing if there is fresh air

and sunshine. Seeing that the air by the sea is clearer, makes a person freer somehow and the environment is not a hectic one, rather quiet and peaceful which is good for health. Compared to city center, the sea is relaxing with the benefits of fresh air and nature is generally good for one's wellbeing and it makes sense to think that the sound of ocean waves makes most people feel calm and better.

The above result also confirm the literature, theory and past research – that exposure to natural environments can help restore depleted emotional and cognitive resources. For example, in the literature review, Völker and Kistemann (2011) states that water (lake, river and the coast) is one of the most important physical, aesthetic landscape elements that provides health and wellbeing to humans.

Coastal areas make a person feel free as there is no traffic but pure air. The ocean has good minerals, salt and seawater that are good for the skin. Living by the coast prove to have positive effects and the possibility to eat fish, swim, dive, sunbathe, breathe fresh air and to enjoy iodine enriched atmospheric sea-salt particles every day. One could think that probably the salt and mineral content of sea water and vapor in the air couple with open space is good for health and wellbeing.

Spending holidays by the seaside rejuvenates and fills one with positive energy and living in that environment means having a place where one can sort out thoughts, reflect on life and let go of negative emotion. The water in coastal areas is good for blood circulation; the quality of the air is different and nature in many ways is beneficial to man. Natural places like coastal environments offer medicine and positive psychological effects on people. Water is such a purifying element both physically and mentally and it makes perfect sense to believe that it is good for health and wellbeing. One could say that since coastal environments are so refreshing, it is possible to reduce stress level and when the sun shines there, one gets extra vitamins.

This particular result analysis is about respondents' personal experience of coastal environments and in what ways the said landscapes had influenced their health and wellbeing. The responses from respondents are diverse but there are a lot of

statements that can be classified as repetitions in the total result. For instance, statements like (1) "it calms me down, I feel calm there, beautiful scenery calms me down a bit, it calms down my soul, and (2) I have become more relaxed, more relaxed, better relaxation, I feel more relaxed and it helps me to relax" are classified as repetitions that simply means that coastal areas are calming and provides the benefit of relaxation to those respondents with above experiences.

Nevertheless, the diverse aspect of respondents' use of coastal environments in relation to health and wellbeing ranges from physical, emotional and to mental benefits as their answers reveals. Based on respondents' comments about their experience of coastal landscapes, the environment provides recreational opportunities and encourages one to do more exercises like swimming (is refreshing and fitness), walking, jogging and other outdoor activities. One may feel more active because people are generally friendly there and talking to one another, which is good for a hobby like surfing. Surfing and running on the beach are great exercise for health. The area makes one want to be outside to sunbathe, tan, and do energetic sports and to get vitamin D. Swimming in coastal water is good for one's skin and also make a person look more energetic and to reach great physical shape. The combination of fresh air, picturesque landscapes and healing water gives a person good result. At least one can get D-vitamin from the sun while lying on the beach sand in coastal areas. Coastal landscapes are open for all by bringing everyone together, making one feel warm and happy which no other leisure place can offer. One can say that riding bicycle by the seaside area produces an invigorating moment.

Responses that relate to emotional benefits are shown in this paragraph. Coastal landscapes are good for respiratory problems, relaxation and enjoyment purposes and enjoying the beautiful view make a person feel positive and happy. Fresh air is soothing and empowers an individual when feeling upset because the body calms down and breathing is easier. Since the environment is peaceful, it helps a person to relax; one can feel better and happier. Watching the ocean and looking at the waves brings peace of mind refreshed head, general happiness and better wellbeing. The environment gives possibility to enjoy free, good, and pleasurable

time with friends, breathe fresh air; to have lots of fun and good beach experiences there puts a person in a good mood and to feel content. One can always remember to have had happy times with family there and would want to go back to spend more time enjoying beautiful scenery. Coastal environments make a person to forget some troubles in life, overcome headache, get more energy, determination and trust in the future and great feeling after the visit. Coastal areas are healthy environments that help a person to get out of depression, changes in mood and make one more active and life-loving.

This paragraph is only about respondent answers that are connected to mental health benefits based on their personal experience of coastal environments. The environment is a better place to adjust stressful thoughts, get rid of stress or reduce stress level. The fresh air helps one to feel better mentally and to think clearly. Also the relaxing environment of coastal landscape calms one's soul, hence treats a person's mental hurt. Living by the coast and being familiar with the sea that is so big makes one feel safe and forget about stress or at least it decreases a lot. Looking at coastal horizon and floating in the seawater makes one immediately feel mentally free because a person can get rid of his/her weight. Certainly one feels better in coastal areas because it elevates people mentally and physiologically. Coastal landscapes are good for meditation, sleep and make it easier to think, but lake environments provide relief from stress and one can take inspiration from its surrounding nature. Somehow, believing that a walk in such environment is good for mental, when experiencing issues at work, jogging in coastal areas have helped to gain strength to carry on.

The next two last questions in the survey are - (a) "choose which water-based environment you find the most attractive for leisure and wellbeing and (b) give a reason for this preference. To the first question, four response choices were given, which are "river, coast, spa and lake". Respondents' answers are described in the chart below:

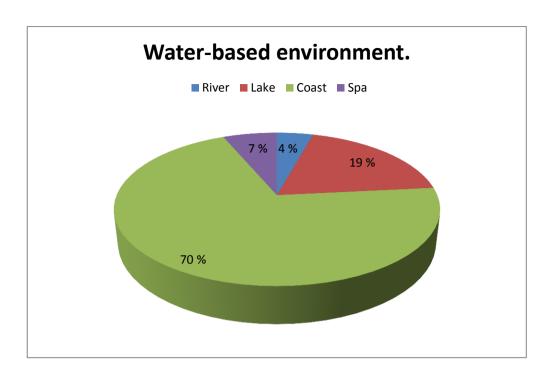


Figure 4. Respondents' choice of the most attractive water-based environment for leisure and wellbeing.

As shown above, respondents favour the coast as the most attractive water-based environment for leisure and wellbeing, followed by lake, spa and river respectively. Some few respondents that chose the coast also indicated that lakes are attractive when giving a reason to support the chosen preference. However a few of the reasons given to support the coast as the most and the lake as the second most preferred water-based environment for leisure and wellbeing by some respondents are associated with either because certain individuals live or have lived near the said areas. However, the size, view, smell, attractiveness and the fresh air of the coast are some common reasons why certain respondents preferred it to other response choice while for lakes, it is that the water is better for swimming, no salt in them and having summer cottage by the said environment. Reasons given by respondents for each response choice will then be expressed respectively in the order of "coast, lake, spa and river.

The ocean looks infinite, the sounds of the waves are nice and there is more water and social activities like surfing, sunbathing, etc. One could think that sea water is good for relaxing and wellbeing via treatments but also big open areas helps to reduce people's perception of problems. The seaside is more exotic, it provides the possibility to walk, feel the fresh air and water while enjoying the sound that comes from the sea. Also, coastal areas are usually wide and beautiful with a lot of entertaining activities and services. Thinking of the size of the ocean, which is an impressive area, it gives one a lot to think about and the vast area of land or water rarely get over-crowded while by contrast lakes/river have small areas for people to meet and thus can get crowded. The smell, sound and big open space are the reason one could consider sea water to be the best for health and leisure.

Furthermore, the ocean has no endings, which is a good feeling and that makes humans, so small when very near to its shore. Being born close to a coastal city, one gets used to the beach the most but also the rivers can often be muddy (dirty water), spas indoors and lakes are mostly small. The coast can be seen as the most beautiful option where one is extra relaxed and happy with a more peaceful mind which reminds a person about summer and vacation. One can think that the coast offers everything; there are more options to do sport and it is the most beautiful and relaxing compared to the other options. The smell and waves of the coast and is good for sunbathing but there is a downside of salt in the water which tastes bad. The coast has beautiful atmosphere with vivid sound of nature, nice sand, no mosquitos and other insects like in the lake areas. Comparing to all the other response choice, the coast is much better for relaxation and exciting for leisure and wellbeing where one can see a boundless body of water, hear the sound waves, feel the warm sunshine and the touch of the sand and breathing fresh coastal air. The coast is enjoyable for the whole family and there are numerous possibilities for health improving factors. The salt and colour in coastal water are important and its shore is much better and good for scenic beauty. The environments around the coast are lively and one can feel released. In general, the coast makes deep and favourable impression in the mind and senses. The coast is more accessible and bigger compared to other natural water-based environments.

Those respondents that choose lake as the most attractive water-based environment for leisure and wellbeing provided the following reasons: lakes are good for swimming (water is warmer compared to rivers and less salty to coast),

quieter surroundings and usually not as windy like in seaside areas. Having a summer cottage by the lake, one can spend a lot of time there during summer enjoying the water more than salt-water. Living in Eastern Finland, one gets used to the lakes and feel most comfortable in and around them. Lakes represents Finland and is really peaceful more than the coast. Usually there are fewer noises by the lakes and coasts are more for tourists, but one could think that lakes are much more relaxing. Also, the lakes are more natural, tranquil and probably healthier.

Here are the reasons given by respondents that preferred spas and river as the most attractive for leisure and wellbeing. Spas are excellent for recreation and wellbeing, which allow one to relax and interact with staffs. Also, spas are very relaxing, beautiful, and warm and there are staffs to serve customers which can make one feel happy. One would assume that spas are good for wellbeing via different treatments. Thinking about river, the water flows often in the woods, and the nearby area is beautiful, there are other landscapes like mountains around and the sound of water flow has been just as relaxing as the ocean.

3.3 Discussion of Research Outcome and Suggestions for Further Study

It has long been known that people often prefer or respond positively to landscapes containing water elements such as rivers, lakes and the coast. However, it can be argued that such preference for waterscape areas is somehow related to wellbeing benefits that are associated with spending time in those environments. Based on the outcome on the survey carried out, most people's motivation for visiting coastal areas is for sunbathing and walking or jogging. Sunbathing in this regard can be interpreted as a form of relaxation, taking in fresh air and feeling restored near the coast. Thus sunbathing can be seen as a sort of passive approach while walking or jogging by contrast an active way of promoting health and wellbeing in coastal areas.

As the outcome of the survey suggests, people generally see coastal environments as places for sunbathing, relaxation, having fun, spending leisure time, doing

water-related sports, for reducing stress level and breathing fresh air. All of these reveal to some extent that people have some understanding of how important coastal areas are for promoting health and wellbeing. This can be one of the many reasons why people generally preferred waterscape areas to other natural or built environments. People do enjoy the benefit of fresh air, somehow feel active and want to do more sports and fitness activities when they are by the coast which is also stated in (DEFRA, 2011), but also, they feel passive and want to lie down and relax in the same environments. It is very possible that after engaging in sport and fitness activities, one feels tired and then opt for a passive means of enjoying the coast.

People's positive association with coastal landscapes is an important factor when it comes to understanding health and wellbeing in this context since there is no scientific mechanism at the moment to measure this phenomenon. Thus practical means of documenting people's motivation, emotions and mood when exposed to coastal areas and finding health and wellbeing promoting attributes from their common experiences is for now one way to investigate what benefit is derived. As this research shows, the majority of people that have been to coastal landscapes generally feels happy and these environments help people to clear their head and think more clearly.

Also, coastal areas have the potential of making people feel better when they are sad or depressed, and when stressed being in the environment brings a calming feeling. Having said that, one must take into account that there is another side of the story. Overcrowded coast or beach space can produce the opposite by increasing the level of depression and stress depending how people view overcrowding – good or bad and many other variables such as inclement weather condition, lack of space planning and proper management, bad sanitation etc. may as well contribute to the unwanted outcome. These health benefits were also documented by White et al. (2013) – coastal environments brings about lower mental distress, higher mental, and reduce mood disorder such as anxiety and depression.

Therefore, seeing that coastal environments are equipped with the above health and wellbeing benefits as testified by individuals who have spent time in these landscapes and other research documents like that of Foley (2010); Serbulea and Payyappallimana, (2012; Ashbullby et al. (2013), one could say that knowingly or unknowingly, health and wellbeing do influence the choice to visit the said water space. In this way, it can be argued that people expect the benefits of less or no stress, great relaxation, to breathe in fresh air, some enjoyable sports and fitness activities and to return home with better feeling and looking refreshed. Also, enjoying the picturesque nature of coastal areas is very important, especially for people who do not live near to it.

In the context of tourism destination, coastal areas may have a different connotation that are not health and wellbeing related because marketing campaign often focus on aquatic elements, such as the beach, sun and other tourist-related services that can generate profit. For example, a seashore area and accommodation facilities are often used in brochures and other marketing materials to promote coastal tourism destinations. This kind of approach makes sense and maybe easier to communicate with potential markets, but it does not necessarily expose tourists' to seeing coastal landscapes as health and wellbeing promoting space. With the current trends of overcrowding beaches and unhealthy practices in coastal places and rising number of building projects that are eliminating natural environments, there seem to be some threats to the health benefits of coastal landscapes. Hedonistic, crowded spaces but maybe out of season they are very different (e.g. Pärnu).

Perhaps not so surprising, fresh air is perceived as the most beneficiary element of coastal environments to well being. Fresh air is very important for overall positive experience of coastal landscapes. It can go a long way to influence how people connect with the environment and the quality of relaxation enjoyed. It is easy to breathe when the air is fresh, which in turn promotes at least a sense of good feeling and the desire to engage in other activities, such as swimming in water, walking on the beach, sunbathing etc. around the coastal areas. However, one could imagine that the quality of fresh air in coastal areas varies depending on

how far they are from city zones and sustainable programmes that are in place. Coastal cities at times do face the dilemmas of undesirable tourism outcome, such as exceeding carrying capacity during high season.

Also, people see other elements of coastal landscapes like sunshine, ocean sound and walking on beach sand are heavily perceived beneficiary to wellbeing. These three elements can be seen as distinguishing features that people often relate to when talking a holiday to coastal areas. Also, sunshine is one element that brings to life the beauty of coastal landscapes as well as to visitors. Sunshine and beach have the profound ability to pull tourists for holidaying during summer times. Consequently, visiting this type of coastal areas, visitors above all expects to experience these elements. From a tourism point of view, clement weather is very important. In addition, research has shown that preferences for waterscapes are more affected by weather conditions than those for terrestrial landscapes (White et al. 2013b).

Many people understand that the possibility to have excellent quality relaxation, breathe fresh air, swim and do sports, walk to clear one's head and think clearly, sunbathe and enjoy the sound of ocean in coastal places can be health promoting. Coastal landscapes are usually aesthetically pleasing and calming, which can reduce the stress level, but also they are less polluted compared to city spaces. Furthermore, in line with what has been said – health benefits in terms of low mental distress and life satisfaction are higher for those living 5 km from the coast White et al., (2013) and other positive benefits include stewardship, connection to place, improved social capacity and improved health and wellbeing (Koss and Kingsley 2010, p. 448).

People can feel refreshed with positive mind by spending time on the coast and such feeling in turn affect the immune and endocrine system positively, which thereby reduce stress level. As it is known, taking a swim in water is good for blood circulation, which is important for stabilizing body temperature, nutrients to and waste materials away from all body tissues. Also, floating in water means blood is diverted around from the lower limbs and pumped towards the abdominal region because the body is not standing upright, which helps fresh blood being

pumped around the body that brings more oxygen to the brain, making people more alert and active. According to research, the sound of waves alters wave patterns in the brain that is soothing for a deeply relaxed state, which is helping to rejuvenate the mind and body.

The sea air is charged with healthy negative ions that accelerate people's ability to absorb oxygen, beside negative ions balance levels of serotonin – a body chemical linked with mood and stress, which is one reason why people do feel more alert, relaxed and energized after spending time by the sea.

Coastal areas provide the opportunities to promote health and wellbeing, physical, emotionally and mentally as the survey and other academic work reveals – the aquatic environment is perceived to be beneficial to wellbeing, as, regardless of the activity performed, visitors are seen to leave the shore in a happier mood Wyles, Pahl and Thompson, (2013). Apart from the nutritional properties, it can be said that the seaside provides a variety of other health-improving features that people can benefit from, which are mentioned above.

Coastal landscapes offer more than the three (S) sand, sun and sea of tourism that has become its emblem through various marketing agents. Perhaps, tourists opinion differs from that of marketers – people now look beyond this popular notion of three S of tourism, which fails to identify the inner benefits of spending time in coastal landscapes. While it is true that the element of coastal areas, such as sun, sea and sand are very important for marketing in the context of tourism destination on the one hand, tourists expect some health and wellbeing giving benefits when on a holiday to this environment. As such, tourist wants to feel rejuvenated, to think clearly, less stressed, being in better mood, quality relaxation and other possible health improving benefits that can be derived from spending time in coastal places when they leave the said environments on the other hand.

In this view, coastal environments conceivably need a new face that is health and wellbeing related – a face that can make people understand and use these environments for better purposes, seeing that seaside areas are now becoming an avenue for unsustainable and unhealthy practices. Also, over-construction of

tourism related facilities that alter the natural landscapes of coastal places can as well reduce the benefits associated with these environments.

Based on respondents' opinions of coastal landscapes, the coast can be promoted for its health-giving benefits physically, emotionally and mentally by emphasizing on how each element serve for some particularly health-improving purpose, also, designing other tourism services to match a given feature as to increase the possibility of deriving possible health benefit.

Those people that preferred sunbathing, relaxation, sound waves and water sport activities like surfing and diving in water-based environments are likely to find the coast as the most attractive places for leisure and wellbeing. While for those people that like swimming, canoeing/rowling, fishing, watching fauna and fauna in water landscapes are likely to prefer lake areas as the research slightly reveals. Besides, the possibilities that the coast provides in terms of commercial services can as well make certain individuals to prefer such places, unlike most lakes, there are no businesses that offer extra such privileges. However, lakes are perfect places for people that like the combination of forest and water experience without heavy amenities or facilities.

Also, the coasts are more about holiday destinations where visitors can spend a day or more during visits, but lakes are mostly attractions with cottages where locals (and also tourists) can enjoy a weekend of being close to peaceful nature whenever possible. In way, one can say that with ever-increasing development of coastal areas, the lakes are more natural. It is hard to call which is healthier when thinking about health and wellbeing benefits between the coasts, lakes, spas and rivers. What is obvious, is that most people prefers the coast as the best attractive water-based environment for leisure and wellbeing.

Coastal areas are less discussed from the perspective of health and wellbeing despite its popularity as an ideal place for summer holidays. Health and wellbeing is a field that is very important to humanity which countless number of professionals have given attention in the study of medicine. However, the rise of alternative medicine may have in some ways lead to the study of health and

wellbeing from an environmental viewpoint. Also, the idea that coastal landscapes promotes human health and wellbeing is very recent, which is explained through psychological knowledge.

This very research paper reveals that people do experience some health and wellbeing promoting benefits of spending time in coastal landscapes, but more practical and scientific ways of understanding this phenomenon is required from various angles. For example, a profound exercise of revealing how the body functions biologically in the said landscapes are important for better understanding of how people derive health and wellbeing when exposed to these areas before explaining it psychologically.

While this paper mainly focuses on the health and wellbeing benefits of coastal environments, there are a host of other ways to investigate the said landscapes from various fields of studies like tourism, health and wellbeing, environmental protection. From a tourism perspective, research can focus on the following recommendations:

- The ways to explain health and wellbeing benefits that are associated with each leisure activity in coastal destinations
- How to promote coastal tourism destinations for its health and wellbeing promoting benefits and selling points
- Ways to develop and redesign coastal facilities and services in a way to support its health giving benefits

From a health and wellbeing take, research can focus on the following suggestions:

- To research whether coastal landscapes can effectively for limit stress levels than other options
- To investigate how climate, seasons and weather condition may affect the level of health and wellbeing benefits of coastal places
- To see how the coast might be different to other water-based environments in terms of health and wellbeing

- To see how certain elements and activities on the coast can result in specific health and wellbeing benefits
- To investigate health-limiting practices of use of coastal landscapes that may be deterring its health-enhancing properties

From an environmental protection point of view, attention can be given to the following recommendation:

 How to design or redesign coastal areas to strengthen its health-giving benefits without or less damage to the environments

In relation to wellness and spa service design and management, the outcome of this work offer some new insights on how to further improve both personal and environmental wellness. From the view of personal wellness, it gives some basic ways to boost physical and emotion health and wellbeing by engaging in some health-promoting practices in coastal environments. While from the perspective of environmental wellness, more preserving schemes and better use of the landscapes for health promotion must be encourage through different means. Also, in coastal tourism destionations, wellness and spa services perhaps should find ways to includes health benefits of the said landscapes in their marketing activities as to raise more awareness for tourists as well as locals.

Conclusion

The result from this research paper to some extent, reveals some motivation and opinion several people have concerning coastal landscapes. Also, the research outcome supports some of the literatures reviewed in the cause of this project (under the subheading of health benefit of coastal environments in page 29). There are possible host of other reasons why people visit coastal environments, but this paper makes known of some them which are "for walking or jogging, for sunbathing and for sports recreation". More people belief that coastal environments are more relaxing than any other landscapes and some other individuals sees it as more beautiful than any other settings.

It can be said that people use water-based environment for promoting their well being through various means, e.g. relaxation, sunbathing, doing water-sports, receiving fresh air and so on. The seaside provides the benefit of fresh air and people feel more active when they are by the coast, which make them to do more sports and fitness activities. Also, people want to lie down and relax. The benefit of fresh air is very essential to positively experience coastal areas, especially in high seasons when there are lots of tourists.

In addition, being in a coastal environment make people feel generally happy and often they walk on the beach to clear their head so that they can think more clearly. To some degree, it can be said that going to the beach (seaside) when one is sad or depressed can make a person feel better. There is the element of truth that certain people may have more fun on the beach with friends than in other landscapes but this requires more specific investigation. Coastal landscapes calms people down when they are stressed, which is consistent with one of the strongest health benefits some scholars have already uncovered. All of these health and wellbeing benefits serve as a new way to redefine coastal environments. Thus, it

is very much important to bring to the forefront the health and wellbeing benefits of coastal areas in environmental discussions, especially in the areas of destination planning, conservation, land (marine) use and sustainable management.

People perceive differently, which elements of coastal environments are most beneficial to health and wellbeing. However, fresh air, sunshine, ocean sound and seawater are seen as the most valuable elements to health and wellbeing. Some people also see the beach sand (pebble) and flora and fauna as health benefiting elements. In general, all of the above elements are symbolic features that represent coastal landscapes. Besides these elements, wide space, scenic view, the atmosphere, the presence of people and other tourism-related components are one way or the other by which coastal places can be perceived beneficiary to health and wellbeing.

One reinforcing claims that respondents have indicated in this research paper is that coastal landscapes are aesthetically pleasing, calming and reduces stress. It makes one feel better and happier and generally less polluted compared to cities. Also, that the environment provides the chance to spend quality time with family and friends, serve as a reminder for busy people to slow down and relax. Also, the contention that waterscapes are more preferred for restorative purpose than any other landscapes is becoming obviously true.

Coastal areas are healthy places because people can breathe in good oxygen that helps the body to reform itself when certain damages occur. When one steps into coastal landscapes, everything feels different, easier and more relaxing life and all of this is good for the body. The calming and relaxing effects which one may not find in urban landscapes help people to meditate with calm mind.

Coastal landscapes do provide leisure and recreation activities with scenic attraction. Natural environments are increasingly being considered as key settings for health promotion and evidence supporting the notion that people like and respond positively to waterscapes is longstanding. The holistic definition of health by (WHO 1948), which define health as "a state of complete physical, mental and

social wellbeing and not merely the absence of disease and infirmity" is very important for understanding health and wellbeing in coastal environments.

As the number of people that experience stress and depression continue to rise, coastal areas can serve as an offsetting instrument by producing restorative effects, positive mood, calmness, and a feeling of improved mental wellbeing when exposed to the said environments. People's experience of coastal landscapes encompasses physical, emotional and mental wellbeing as the outcome of the survey suggests. All these positive effects that can be derived from coastal places are important to life satisfaction and general happiness.

More understanding of how coastal environments promotes human health and wellbeing is needed for uncovering various ways to positively use these landscapes. Such endeavours will benefit humans, businesses, policy makers and development of coastal areas. Seeing that coastal settings are associated with higher preferences and is perceived to contain some elements that are healthenhancing than other natural and built areas, the need to consider the value of adding seaside features to made environments, or to frequently visit natural aquatic space, to promote the health and wellbeing of citizens, employees and patients must be encouraged.

The aim of this thesis is achieved through the survey carried out. People's views about coastal environments in relation to health and wellbeing is positive. Coastal environments are viewed as ideal settings that can promote quality relaxation, reduce stress level, and enhance positive mood etc. when people spend time there. This particular work is just a small starting point for improving understanding of why coastal environments are important to human health and wellbeing. The number of respondents in this research paper is relatively small to make absolute conclusions that all coastal settings are health-enhancing. Nonetheless, the result of respondents are valid and can be used for gaining some understanding into further research. To end this all, this paper encourages people to take advantage of the health benefits of water-based environments whenever possible as a way of maintaining optimum personal wellbeing.

References

- 1. Alder, J., (2003) Distribution of estuaries worldwide. Sea Around Us Project, UBC, Vancouver, Canada.
- 2. Andrews, G.J., Chen, S. and Myers, S., (2014). The "taking place" of health and wellbeing: towards non-representational theory. Social Science and Medicine.
- 3. Anspaugh, D., Hamrick, M., & Rosato, F. (2004). Wellness: Concepts and Applications 6th edition. Boston: McGraw Hill.
- 4. Agishi, Y. and Ohtsuka, Y., (1998). Present features of balneotherapy in Japan. Global. Environmental Research 2, 177–185.
- 5. Ardell, Donald (2004): Conference blurb for "The Importance of Critical Thinking and Evidence-Based Research in the Field of Wellness," a paper delivered before the National Wellness Conference, (2004).
- 6. Arlington and Dunn, H.L. (1977). What High Level Wellness Means. Health Values, 1, 9-16.
- 7. Ashbullby, K.J., Pahl, S., Webley, P., and White, M.P. (2013). The beach as a setting for families' health promotion: A qualitative study with parents and children living in coastal regions in Southwest England. Health and Place 23, 138-147.
- 8. Bai, X., Nath, I., Capon, A., Hasan, N., and Jaron, D., (2012). Health and wellbeing in the changing urban environment: complex challenges, scientific responses and the way forward. Environmental sustainability 4, 465-472.
- 9. Birdir, S., Ûnal, Ö., Birdir, K. and Williams, A.T., (2013). Willingness to pay as an economic instrument for coastal tourism management: Cases from Mersun, Turkey. Tourism Management 36, 279-283.

- 10. Bouchard, C., Shephard, R. J., & Stephens, T. (1994). Physical activity, fitness and health. Champaign, IL: Human Kinetics.
- 11. Burke, L., Kura, K., Kassem, K., Ravenga, C., Spalding, M., and McAllister, D. (2001) Pilot Assessment of Global Ecosystems: Coastal Ecosystems. World Resources Institute (WRI), Washington, D.C. (USA).
- 12. Cirer-Costa, J.C., (2014). Spain's new coastal destination. 1883-1936: The mainstay of the development of tourism before the Second World War. Annals of Tourism Research 45, 18-29.
- 13. Cohen, J.E., Small, C., Mellinger, A., Gallup, J., and Sachs, J., (1997) Estimates of coastal populations. Science, 278, 1211–1212.
- 14. Coastal Zones European Commission (2011). http://ec.europa.eu/environment/enveco/impact_studies/pdf/land_use_mode lling%20adaptation_activities_coastal.pdf
- 15. Coombes, E., Jones, A.P., and Hillsdon, M. (2010). The relationship of physical activity and overweight to objectively measured green space accessibility and use. Social Science and Medicine 70 (6), 816-822.
- 16. Corbin, A., (1994). The lure of the Sea. The discovery of the Seaside in the Western World 1750-1840. University of California Press, Berkeley and Los Angeles.
- 17. Dayton, P.K., (2003). The importance of the natural sciences to conservation. American Naturalist, 162(1), 1–13.
- 18. DEFRA, (2011). The natural choice: securing the value of nature. (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228842/8082.pdf). (Accessed 02.03.2014).
- 19. Depken, D. (1994). Wellness through the lens of gender: A paradigm shift. Wellness Perspectives: Research, Theory, and Practice, 70, 54-69.
- 20. Dunn, Halbert L. (1959): High Level Wellness. Arlington, VA: R.W. Beatty, Ltd.
- 21. EC (European Commission), (2004). Living with coastal erosion in Europe: Sediment and Space for Sustainability. Guidelines for implementing local information systems dedicated to coastal erosion management.

- 22. Fletcher, H. and Frid, C.L.J., (1996). Impact and management of visitor pressure on rocky intertidal algal communities. Aquatic Conservation 6, 287-297.
- 23. Foddy, W. (1993). Constructing Questions for Interviews and Questionnaires: Theory and Practice in Social Research, Cambridge: Cambridge University Press.
- 24. Foley, D. (2010). Healing waters: Therapeutic Landscapes in Historic and Contemporary Ireland. Geographies of Health. Ashgate Publishing, Ltd.
- 25. Gesler, W., (1998). Bath's reputation as a healing place. Health into Place. Syracuse University Press, Syracuse pp. 17–35.
- 26. Global Spa Summit, (2011). Research Report: Wellness Tourism and Medical Tourism; Where Do Spas fit?
- 27. Greenberg, J. S. (1985). Health and wellness: A conceptual differentiation. Journal of School Health, 55,403-406.
- 28. Janice, B. (2011). Encyclopedia of Survey Research Methods. SAGE Publications.
- 29. Jonas, S. (2005). The wellness process for healthy living: A mental tool for facilitating progress through the stages of change.
- 30. Hall M.C. (2001), Trends in Ocean And Coastal Tourism: The End of The Last Frontier. Ocean & Coastal Management, 44, pp. 601-618.
- 31. Hartwell, H., Hemingway, A., Fyall, A., Filimonau, V., Wall, S. and Short, N. (2013). Building tourism and well-being policy: engaging with the public health agenda in the UK. In Smith, M. K. and Puczkó, L. (Eds) Health, Tourism and Hospitality: Spas, Wellness and Medical Travel. London: Routledge: 397-401.
- 32. Hinrichsen, D., (1998). Coastal Waters of the World: Trends, Threats, and Strategies. Washington, D.C: Island Press
- 33. Hobbie, J.E., (2000). Estuarine Science: A Synthetic Approach to Research and Practice. Island Press, Washington, D.C. USA.
- 34. Holbrook, M. B and Hirschman, E. C (1982). The Experiential Aspects of Consumption: Consumer Fantasies, Feeling, and Fun. Journal of Consumer Research 9, (2): 132 140.

- 35. In the front line: Shoreline protection and other ecosystem services from mangroves and coral reefs (2010). UNEP-WCMC Report. https://ia600509.us.archive.org/3/items/infrontlineshore06well/infrontlineshore06well.pdf
- 36. Izquierdo, C. (2005). When health is not enough: societal, individual and biomedical assessments of well-being among the Matsigenka of the Peruvian Amazon. Social Science and Medicine 61, 767-783.
- 37. Kask, T and Hinsberg, A (2012). Estonian Tourism Regions in the 19th and 20th Century. Estonian School of Hotel and Tourism Management (EHTE), Tallinn, Estonia.
- 38. Kaplan, S. and Berman, M.G. (2010). Directed attention as a common resource for executive functioning and self-regulation. Perspective on Psychological Science. 5 (1), 43-57
- 39. Kendall and Kendall (2002). System Analysis and Design. Prentice Hall, Inc.
- 40. Kearns, R. A., and Gesler, W.M. (1998). Putting Health Into Place: Landscape, Identity and Well-being. Medical Geography. Syracuse University press, Syracuse, New York.
- 41. Kelly, J. G. (2000). Wellness as an ecological enterprise. Washington D.C. Press.
- 42. Koss, R.S. and Kingsley, J.Y, (2010). Volunteer and emotional wellbeing in marine protected areas. Ocean and Coastal Management 53, 447-453.
- 43. Larson, J. S. (1999). The conceptualization of health. Medical Care Research and Review, 56, (2) 123-136.
- 44. Lazarsfeld, P.F. (1944). The controversy over detailed interviews an offer for negotiation. Public Opinion Quarterly, 8. 38-60.
- 45. Lianyong, W. and Eagles, P.F.J., (2009). Some theoretical considerations: From landscape ecology to waterscape ecology. Acta Ecologica Sinica 29, 176-181.
- 46. Malhotra, N. K. (2004). Marketing research: An applied orientation (4th edition). Upper Saddle River, New Jersey: Prentice Hall.

- 47. Mark, G.T., and Lyons, A., (2010). Maori healers' views on wellbeing: The importance of mind, body, spirit, family and land. Social Science and Medicine 70, 1756-1764.
- 48. Marc, C. In Global Spa Industry (2010). Understanding the Global Spa Industry. Spa Management.
- 49. McCormack, D. P. (2007). Molecular affects in human geographies. Environment and Planning A, 39 (2), 359.
- 50. McCabe, S., Joldersma, T. and Li, C. (2010). Understanding the benefits of social tourism: linking participation to subjective wellbeing and quality of life. International Journal of Tourism Research 12: 761 773.
- 51. Millennium Ecosystem Assesment. Ecosystems and Human Well-Being: Synthesis Report (Millennium Ecosystem Assessment, 2005).
- 52. Miller, G. and Foster, L., (2010). Critical Synthesis of Wellness Literature. University of Victoria Faculty of Human and Social Development and Department of Geography.
- 53. The national survey on people and the natural environment. (Monitor of Engagement with the Natural Environment 2013) Natural England Commissioned Report (NECR123).
- 54. Myers, J. E., Sweeney, T.J., & Witmer, M. (2005). A Holistic Model of Wellness.
- 55. Natural England's Role in Improving Sites of Special Scientific Interest. (Natural England, 2009). Thirty Fourth Report of Session 2008 2009.
- 56. Monitor of Engagement with the Natural Environment. (Natural England, 2011). Annual Report from 2010-2011 Survey. Natural England, Sheffield.
- 57. Onofri, L., and Nunes, P., (2013). Beach "lover" and green: A worldwide empirical analysis of coastal tourism. Ecological Economics 88 49-56.
- 58. Pile, S. (2010). Emotions and affect in recent human geography. Transactions Institute British Geographers. 35, (1) 5-20
- 59. Pinn, E.H., Rodgers, M., (2005). The influence of visitors on intertidal biodiversity. Journal of Marine Biological Association. 85, 263-268.
- 60. Prasetya G. (2007). The role of coastal forests and trees in protecting against coastal erosion.

- 61. Reinert, A., Herlevi, A., Arst, H. and Sipelgas L. (2002). Preliminary optical classification of lakes and coastal waters in Estonia and Southern Finland. Journal of Sea Research, 49, 357 366.
- 62. Rose, E., (2012). Encountering place: A psychoanalytic approach for understanding how therapeutic landscape benefit health and wellbeing. Health and Place 18, 1381-1387.
- 63. Ruback, R.B., Pandey, J., & Kohli, N. (2008). Evaluations of a sacred place: role and religious belief at the Magh Mela. Journal of Environmental Psychology, 28, 174-184.
- 64. Sackney, L., Noonan, B., & Miller, C. M. (2000). Leadership for educator wellness: An exploratory study. Int. J. Leadership in Education, 3(1), 41-56.
- 65. Serbulea, M. and Payyappallimana. U., (2012). Onsen (hot springs) in Japan: Transforming terrain into healing landscapes. Health and Places, Vol.18, 1366-1373.
- 66. Solomon, S. (2010). Water: The epic struggle for wealth, power and civilization. New York: Harper Collins.
- 67. Tubergen, A. V. and Linden, S. V., (2002). A brief history of spa therapy. Annals Rheumatology. 61, 273-275.
- 68. Tokuda, Y., Doba, N., Butler, J.P., and Paasche-Orlow, M.K., (2009). Health literacy and physical and psychological wellbeing in Japanese adults. Patient Education and Counseling 17, 411-417.
- 69. Ulrich, R.S., Simons, R., Losito, B., Fiorito, E., Miles, M., and Zelson, M. (1991). Stress recovery during exposure to natural and urban environments. Journal of Environmental Psychology 11, 201-230.
- 70. Völker, S., and Kistemann, T. (2011). The impact of blue space on human health and well-being Salutogenic health effects of inland surface waters: A review. International Journal of Hygiene and Environmental Health 214, 449-460.
- 71. Völker, S. and Kistemann, T. (2013). Reprint of: "I'm always entirely happy when I'm here"! Urban blue enhancing human health and well-being

- in Cologne and Dussedolf, Germany. Social Science and Medicine 91, 141-152.
- 72. Westgate, C. E. (1996). Spiritual wellness and depression. Journal of Counseling and Development, 75, 26-35.
- 73. Wheeler, B.W., White, M., Stahl-Timmins, W., and Depledge, M.H., (2012). Does living by the coast improve health and wellbeing? Health and Place.
- 74. White, M., Smith, A., Humphryes, K., Pahl, S., Cracknell, D., Depledge, M., (2010). Blue space: the importance of water for preference, affect, and restorativeness ratings of natural and built scenes. J. Environ. Psychology 30 (4), 482 493.
- 75. White, M. P., Pahl, S., Ashbullby, K., Herbert, S., Depledge, M.H., (2013). Feelings of restoration from recent nature visits. J. Environmental. Psychology. 35, 40-51.
- 76. White, M. P., Cracknell, D., Corcoran, A., Jenkinson, G. and Depledge, M. H., (2013b). Do preferences for waterscapes persist in inclement weather and extend to sub-aquatic scenes? Landscape Research Group Ltd.
- 77. World Health Organization. Ottawa Charter for Health Promotion. (1986). online document at: www.who.int/hpr/NPH/docs/ottawa_charter_hp.pdf (Accessed February 2014).
- 78. World Health Organization. Definition of health: online document. http://www.who.int/suggestions/faq/en/ (accessed February 2014)
- 79. World Tourism Organization: http://media.unwto.org/content/understanding-tourism-basic-glossary. (Accessed February 2014).
- 80. Wyles, J. K., Pahl, S. and Thompson, C. R., (2013). Perceived risks and benefits of recreational visits to the marine environment: Integrating impacts on the environment and impacts on the visitor. Ocean and Coastal Management.
- 81. Valiela, I., Bowen, J.L. and York, J.K. (2001). Mangrove forests: One of the world's threatened major tropical environments. Bio-Science, 51(10), 807–815.

Appendix

PLEASE NOTICE that this questionnaire is for those who have visited coastal environments (Beach, Seashores, Ocean, Rivers, Lakes) during the past 24 Months) for holiday, (domestic) leisure and recreation purposes.

Please tick the box that best describes you.

1. Gender		
	Male	
	Female	
2. Age cate	gory	
	20 - 29	
	30 – 39	
	40 – 49	
	50 – 59	
	60 and above	
3. I have v	isited coastal environments and other water-based areas like rivers	
lakes dur	ring the past?	
	12 Months	
	24 Months	

	have lived less than three (3) kilometers away from a coastal	
environm	ent at some point in my life?	
	Yes	
	No	
5. What is y	our motivation for visiting coastal environments?	
	For fishing	
	For sports recreation (e.g. water sports)	
	For sunbathing	
	For walking or jogging	
	Other (please specify)	
•		
	f the following sentences best corresponds to your opinion about vironment:	
	It is more relaxing than any other landscape	
	It is a healthier environment than most other landscapes	
	It is more of a place for tourism activities than any other landscape	
	It is more beautiful than any other landscape	
	Other (please specify)	
•		

Please indicate your degree of agreement by checking one of five response categories. (Strongly disagree, disagree, neither agree nor disagree, agree, strongly agree).

7. I enjoy the benefits of the fresh sea air when I am at the coast
☐ Strongly disagree ☐ disagree ☐ neither agree nor disagree ☐ agree ☐
strongly agree
8. I feel more active when I am by the coast and want to do more sports and fitness activities.
\square Strongly disagree \square disagree \square neither agree nor disagree \square agree \square strongly agree
9. I feel more passive at the coast and just want to lie down and relax.
\square Strongly disagree \square disagree \square neither agree nor disagree \square agree \square strongly agree
10. Being in a coastal environment generally makes me feel happy:
\square Strongly disagree \square disagree \square neither agree nor disagree \square agree \square strongly agree
11. I often walk on the beach to clear my head so I can think more clearly;
\square Strongly disagree \square disagree \square neither agree nor disagree \square agree \square strongly agree
12. I go to the beach when I am sad or depressed and it makes me feel better
\square Strongly disagree \square disagree \square neither agree nor disagree \square agree \square strongly agree
13. I have more fun on the beach with my friends than in other landscapes;
\square Strongly disagree \square disagree \square neither agree nor disagree \square agree \square strongly agree

essed going to a coastal environment calms me down;
disagree \square disagree \square neither agree nor disagree \square agree \square
lect the TOP 3 in order preference what elements of coastal ants do you perceive most beneficial to health and wellbeing?
Swimming in water
Walking on beach sand (pebble)
Ocean sound
Flora and fauna
Sunshine
Fresh air
Other (please specify)
•
know that coastal environments are good for your health and
Yes \(\sum \text{No} \)
ou think this is the case?

		n water-based environment you find the most attractive f
leisu	re and wellbeing	
	River	
	Coast	
	Spa	
	Lake	
20. Base	d on your answe	er to number 12, please give a reason for this preference:
	-	for your participation and support. If you do have an anything you wish to share, please feel free to do so.
		ı

Non-exclusive licence to reproduce thesis and make thesis public

I, Akpoveta Everest Obatitor

(author's name)

1. herewith grant the University of Tartu a free permit (non-exclusive licence) to:

1.1. reproduce, for the purpose of preservation and making available to the public, including for addition to the DSpace digital archives until expiry of the term of validity of the copyright, and

1.2. make available to the public via the web environment of the University of Tartu, including via the DSpace digital archives until expiry of the term of validity of the copyright,

THE IMPORTANCE OF COASTAL ENVIRONMENT IN HUMAN HEALTH
AND WELLBEING

(title of thesis)

supervised by Melanie. K. Smith PhD

(supervisor's name)

2. I am aware of the fact that the author retains these rights.

3. I certify that granting the non-exclusive licence does not infringe the intellectual property rights or rights arising from the Personal Data Protection Act.

Pärnu, 22.05.2014

Rannikkoalueiden/ympäristöjen tärkeys ihmisen terveyden ja hyvinvoinnin mainostamisessa

Tiivistelmä:

Rannikkoalueet tarjoavat lukuisia aineellisia ja aineettomia palveluja ihmisille – sen kuvan kaunis luonto, joka ilahduttaa sekä maiseman terapeuttinen välttämättömyys ihmisille, mistä historia ja nykypäivä meille todistavat. Yhdityneiden kansakuntien ympäristöohjelman (United Nations Environment programme) mukaan rannikkomaisemat on yleisesti määritelty maan ja meren välisiksi liittymäkohdiksi tai muutos alueiksi, suuret järvet mukaan lukien.

Kuten yleisesti tiedetään rannikkoalueet tarjoavat suuret määrät ajanviete ja virkistys toimintaa sekä omaa luonnonkauniit ominaisuudet, millä on suuret vaikutukset matkailualalla. Joka tapauksessa, mikä on mielenkiintoisempaa tässä paperissa on ymmärrys siitä, että rannikkomaisemat ovat terveyttä edistäviä enemmän, kuin yhdella tapaa. Kuitenkin tämän opinnäytetyön päämäärä johdattautui, ymmärtämään yksilöiden näkemystä rannikkoalueiden yhteydestä terveyteen ja hyvinvointiin.

Laajan rannikko-alanopintojen kirjallisuuskatsauksen 'terveys ja hyvinvointi' lisäksi useat työt eri tekijöiltä osoittivat, että rannikkoalueet auttavat vähentämään stressiä, edistävät laadullista rentoutumista, lisäävät tarkkaavaisuuskykyä ja tehostavat positiivista mielialaa. On myös ainakin kaksi syytä ajatella, että kokemukset luonnollisella rannikkoalueella ovat posiitiivisesti yhteydessä terveyden, hyvinvoinnin ja onnellisuuden kanssa: on havaittu suoria kanavia, joissa vastaavat kokemukset vaikuttavat hermostoon vähentäen stressiä ja lisäten tarkkavaisuuskykyä. Luonnolliset ympäristöt (rannikkoalueet) saattavat lisätä onnellisuutta johtaen ja kannustaen (käytänönläheisten, kulttuurillisten ja/tai psykologisien syiden vuoksi) erilaiseen käyttäytymiseen, mitkä ovat fyysisesti ja psyykkisesti suotuisia (DEFRA 2011).

Tiedon keruuseen on käytetty lukumäärällistä tutkimus menetelmää, jossa käytettiin avoimia ja suljettuja kysymyksiä. Tarkoituksena oli selvittää erityisesti

yksittäisten rannikkoalueilla vierailleiden henkilöiden mielipidettä, siitä että tukevatko heidän kokemukset kyseisissä ympäristöissä jo olemassa olevaa teoriaa.

Tutkimus tulos vahvisti nykyistä teoriaa, siitä että rannikkoalueet ovat terveyttä edistäviä paikkoja. Vastaajien vastaukset osoittivat, että rannikkoalueilla oleminen voi yleisesti ottaen tehdä olon onnelliseksi ja, että käveleminen näissä ympäristöissä voi johtaa ihmisiä ajattelemaan selkeämmin. Vastaukset osoittivat myös, että kun on surullinen tai masentunut rannikkoalueella oleminen voi tuoda paremmän olon ja, jos on stressaantunut sinne meneminen voi vähentää ahdistuksen painetta.

Voidaan sanoa, että ihmiset käyttävät vesistö ympäristöjä terveytensä edistämiseen monilla eri tavoilla, kuten esimerkiksi rentoutumalla, ottamalla aurinkoa, harrastaen vesiurheilulajeja jne. Merenranta tarjoaa raittiin ilman hyödyn ja ihmiset tuntevat olonsa aktiivisemmiksi ollessaan rannikkoalueella, mikä saa heidät harrastastamaan uhreilulajeja ja kuntoilemaan enemmän. Ihmiset haluavat myös maata ja rentoutua. Raittiin ilman hyöty on hyvin keskeistä positiivisissa kokemuksissa rannikkoalueilla, erityisesti matkailukausina, kun on paljon turisteja. Tutkimus paljastaa myös sen, että ihmiset kokevat eri tavoin eri elementtien tärkeyden ja keskeisyyden terveyden ja hyvinvoinnin edistämisessä. Kuitenkin raitis ilma, auringonpaiste, merenkuohunta ja merivesi katsotaan kaikkein tärkeimmiksi tekijöiksi terveydelle ja hyvinvoinnille.

Jotkut ihmiset kokevat myös hiekan (pikkukivet) sekä kasviston ja eläimistön terveyttä edistäviksi tekijöiksi. Yleensä ottaen kaikki edellä mainitut tekijät ovat symboolisia ominaisuuksia, jotka edustavat rannikkomaisemia. Sitä paitsi nämä tekijät; avara tila, luonnonkaunis näköala, tunnelma, ihmisten läsnäolo sekä muut matkailuun liittyvät komponentit ovat tavalla tai toisella, joiden kautta rannikkoalueet voidaan mieltää terveyden ja hyvinvoinnin edistäjiksi. Tämän opinnäytetyön pääräämään on päästy tehdyn kyselytutkimuksen kautta. Ihmisten näkemykset rannikkoalueiden suhteesta terveyteen ja hyvinvointiin ovat positiivisia. Rannikkoalueita katsotaan ihanteellisiksi miljöiksi, jotka edistävät laadullista rentoutumista, vähentävät stressiä ja teostavat positiivista mielialaa ine., kun ihmiset viettävät siellä aikaa.