



UNDERSTANDING THE ROLE OF HAPPINESS IN SHAPING THE CONSERVATION ATTITUDES OF WHALE WATCHING PARTICIPANTS

ADEAN ALESSANDRINI (910213010070)



Understanding the Role of Happiness in Shaping the Conservation Attitudes of Whale Watching Participants

Adean Alessandrini (910213010070)

Supervisor: Arjen Buijs

Forest and Nature Policy Group

Wageningen University

June 2019

Cover photo by Brendon Bissonnette Photography

ACKNOWLEDGEMENT

First of all, I would like to thank my thesis supervisor Dr. Arjen Buijs of the Forest and Nature Policy Group at Wageningen University for his patience, knowledge, and enthusiasm throughout the learning process of this thesis.

I would also like to thank Eagle Wing Whale & Wildlife Tours for allowing me to do my data collection with their organization, and for being so incredibly welcoming to me while I was there.

Finally, I'd like to express my sincere gratitude and appreciation to both my parents and my boyfriend who have continually supported me throughout this process. Completion of this thesis would not have been possible without them. Thank you.

Adean Alessandrini

Table of Contents

ACKNOWLEDGEMENT	1
OVERVIEW OF FIGURES	4
OVERVIEW OF TABLES	4
SUMMARY	5
1.0 INTRODUCTION	6
1.1 BACKGROUND	6
1.2 PROBLEM STATEMENT	8
1.3 RESEARCH QUESTIONS	8
1.4 OUTLINE	9
2.0 THEORETICAL FRAMEWORK	10
2.1 WHAT IS POSITIVE PSYCHOLOGY?	10
2.2 THREE PATHWAYS TO HAPPINESS	10
2.2.1 <i>The Pleasant Life</i>	10
2.2.2 <i>The Meaningful Life</i>	11
2.2.3 <i>The Good Life</i>	11
2.3 WHALE WATCHING AND POSITIVE PSYCHOLOGY	12
2.3.1 <i>Whale Watching and the Pleasant Life</i>	12
2.3.2 <i>Whale Watching and the Meaningful Life</i>	13
2.3.3 <i>Whale Watching and the Good Life</i>	15
2.4 SUMMARY	17
2.5 CONCEPTUAL MODEL	18
3.0 METHODS.....	19
3.1 EXPERIMENTAL DESIGN	19
3.2 STUDY SITE	19
3.3 SAMPLE	19
3.4 QUESTIONNAIRE DESIGN	20
3.5 DATA COLLECTION	21
3.6 DATA ANALYSIS	22
3.7 ETHICAL CONSIDERATIONS	24
4.0 RESULTS	25
4.1 ORIENTATION TO HAPPINESS FACTORS	25
4.2 ORIENTATION TO HAPPINESS RELIABILITY	26
4.3 WHALE CONSERVATION ATTITUDES RELIABILITY	27
4.4 CHANGES IN HAPPINESS AND CONSERVATION ATTITUDES AFTER WHALE WATCHING EXCURSION	27
4.4.1 <i>Changes in the Pleasure Dimension</i>	27
4.4.2 <i>Changes in the Meaning Dimension</i>	28
4.4.3 <i>Changes in the Engagement Dimension</i>	29
4.4.4 <i>Changes in Overall Happiness</i>	30
4.4.5 <i>Changes in Conservation Attitudes</i>	30

4.5 WHAT INFLUENCED CONSERVATION ATTITUDES?	31
5.0 DISCUSSION.....	34
5.1 SEEING WHALES ON PLEASURE, MEANING, AND ENGAGEMENT	34
5.2 WHALE WATCHING AND HAPPINESS.....	35
5.2.1 <i>Whale Watching and Pleasure</i>	35
5.2.2 <i>Whale Watching and Meaning</i>	35
5.2.3 <i>Whale Watching and Engagement</i>	36
5.2.4 <i>Whale Watching and Overall Happiness</i>	36
5.3 PLEASURE, MEANING, AND ENGAGEMENT INFLUENCE CONSERVATION ATTITUDES	36
5.3.1 <i>Pleasure and Conservation Attitudes</i>	36
5.3.2 <i>Meaning and Conservation Attitudes</i>	37
5.3.3 <i>Engagement and Conservation Attitudes</i>	37
5.3.4 <i>Overall Happiness and Conservation Attitudes</i>	38
5.4 REFLECTION	38
5.5 LIMITATIONS	40
5.5.1 <i>Study Site</i>	40
5.5.2 <i>Methods</i>	41
5.5.3 <i>Theoretical</i>	42
5.6 RECOMMENDATIONS	42
5.6.1 <i>For Further Research</i>	42
5.6.2 <i>For Conservation</i>	43
6.0 CONCLUSION	44
LITERATURE CITED.....	45
APPENDIX 1: LIST OF WHALE WATCHING COMPANIES CONTACTED.....	49
APPENDIX 2: PRETEST AND POSTTEST QUESTIONNAIRES	50
PRETEST QUESTIONNAIRE.....	50
POSTTEST QUESTIONNAIRE	52
APPENDIX 3: DAILY RECORDINGS OF WHALE WATCHING EXCURSIONS	54

Overview of Figures

FIGURE 1. CONCEPTUAL MODEL OF POSITIVE PSYCHOLOGY PATHS RELATED TO WELL-BEING AND CONSERVATION ATTITUDES.	18
FIGURE 2. MEDIATION PATHWAYS ACCORDING TO BARON AND KENNY (1986).....	23
FIGURE 3. DIFFERENCES IN MEAN SCORES BETWEEN PRETEST AND POSTTEST FOR PLEASURE DIMENSION ITEMS AND TOTAL	28
FIGURE 4. DIFFERENCES IN MEAN SCORES BETWEEN PRETEST AND POSTTEST FOR MEANING DIMENSION ITEMS AND TOTAL.....	29
FIGURE 5. DIFFERENCES IN MEAN SCORES BETWEEN PRETEST AND POSTTEST FOR ENGAGEMENT DIMENSION ITEMS AND TOTAL	30
FIGURE 6. MEDIATION PATHWAYS ACCORDING TO BARON AND KENNY (1986).	32

Overview of Tables

TABLE 1. FACTOR ANALYSIS TABLE FOR ORIENTATION TO HAPPINESS.....	26
TABLE 2. RESULTS OF THE PAIRED SAMPLES T-TEST FOR THE THREE DIMENSIONS OF THE ORIENTATION TO HAPPINESS SCALE.	27
TABLE 3. RESULTS OF THE PAIRED SAMPLES T-TEST FOR THE OVERALL HAPPINESS ITEM.	30
TABLE 4. RESULTS OF THE PAIRED SAMPLES T-TEST FOR WHALE CONSERVATION ATTITUDES.....	31

Summary

The purpose of this research was to investigate the extent to which experiencing whales through whale watching excursions can influence happiness, and subsequently the conservation attitudes of the participants. It was hypothesized that experiencing wildlife during wildlife excursions would increase the happiness of the participants, which would, in turn, influence their conservation attitudes. Data collection was conducted in Victoria, British Columbia with the company "Eagle Wing Whale & Wildlife Tours". Two questionnaires were designed and administered to the participants, one before the whale watching excursion and the other after. Frequency tests, factor analysis, alpha reliability, paired samples t-tests and regression analysis were then conducted on the data. The results of this research showed that happiness, according to three dimensions outlined by the theory of positive psychology (Pleasure, Meaning, and Engagement), as well as the conservation attitudes of the participants were increased after going on the whale watching excursions. However, the changes in the three dimensions of happiness were not a result of the number of whales the participants saw, and as such happiness did not act as a mediator between the number of whales seen and conservation attitudes. Nonetheless, increases in each dimension of happiness was a significant predictor of increases in conservation attitudes.

The implications of these findings are fivefold. First, they highlight the importance of wildlife excursions in influencing one's happiness and conservation attitudes. Second, they emphasize the role that happiness can play in shaping one's conservation attitudes. Third, they highlight an activity with the potential to both make people happier, as well as motivate them to think about nature conservation. Fourth, they provide a deeper understanding of the role that nature plays in the everyday lives of people. Finally, they provide a more in-depth knowledge of the internal processes that can be used to promote nature conservation.

Based on the findings of this research, our recommendations for conservation are the following: to increase funding towards programs that allow people to have experiences in nature; additionally, promotion of nature-based activities that lead people to experience positive emotions, that help them find purpose, and that leave them feeling gracious should be increased; finally, wildlife tourism companies should be expanding their itineraries to include discussions and education about nature conservation.

1.0 Introduction

1.1 Background

Nature is valuable for many reasons. First, it has an intrinsic value (Pearson, 2016). That is, nature is valuable for being nature, so as long as nature exists, then so does the value it holds. Additionally, nature has instrumental or hedonic value; it provides many benefits to humans (Pearson, 2016). It provides them with the important things they need to survive, such as food, water, and shelter (Pearson, 2016). It provides them with crucial services such as decomposition, climate regulation, and recreation (Pearson, 2016). It provides them with experiences which offer many health benefits such as improved physical health, as well as improved mental and social well-being (Shanahan et al., 2016). Additionally, these experiences stimulate happiness, and overall, they have been found to improve lives (Curtin, 2009). All in all, nature left as nature provides a multitude of benefits to humans.

Unfortunately, in this day and age, nature is decreasing at an alarming pace (Amel, Manning, Scott, & Koger, 2017). Biodiversity is declining, the land is degrading, and the climate is warming. This destruction of the natural environment can be largely attributed to the way humans are behaving. They are overexploiting the natural environment to support themselves (Amel et al., 2017). These actions are unsustainable and are creating an uncertain future for generations to come. Humans act in this irresponsible manner for various reasons including convenience, anxiety reduction, and a “compromised kinship with nonhuman nature” (Amel et al., 2017, p. 1). Urbanization, differing lifestyles, and resource degradation are exacerbating this issue as they limit human access to nature (Hartig, Mitchell, de Vries, & Frumkin, 2014). As such, in order to continue accessing and benefitting from nature, nature must continue to exist. This can be done by ensuring it is protected through engagement with activities that emotionally connect and make humans feel a part of nature. This is because the more one feels a part of something, the more concern they have for it, and the more willing they are to protect it (Schultz, 2000). More specifically, the greater the emotional attachment one has to nature, the more likely they will engage in activities to protect it (Kals, Schumacher, & Montada, 1999). Therefore, if humans feel that they are a part of nature and are emotionally attached to it, they will feel a greater obligation to ensure that it is protected.

As the previous discussion makes clear, humans have the opportunity to protect nature by engaging in activities that both emotionally connect and make them feel a part of it. An example of such an activity is wildlife tourism. Wildlife tourism attracts individuals from all over the world and allows them the opportunities to still have meaningful experiences in nature that they might not be able to have otherwise (Ballantyne, Packer, & Hughes, 2009). These experiences can range from animals in captivity, that they visit

in zoos or aquariums, to rare animals in the wild that they see in natural habitats (Ballantyne et al., 2009). By allowing humans to increase their contact with nature, there is an increased likelihood that they will continue experiencing its many positive benefits and they will be encouraged to protect it. Furthermore, experiences such as these have been known to stimulate positive emotions such as happiness (Curtin, 2009). These positive emotions can influence one's behaviors and conservation attitudes (Fredrickson, 2001; Hughes, 2013; Powell & Ham, 2008). Wildlife experiences can increase one's connection to nature, and this connection can lead to selfless actions towards nature (van den Born et al., 2018). Finally, these experiences can be extremely gratifying, which in turn can influence environmental concern (Hartig, Kaiser, & Strumse, 2007)

One particularly interesting wildlife tourism activity to explore is whale watching. Whale watching is an activity in which people go, usually in the form of a tour, to observe whales in their natural environments. Whale watching was chosen to study for four main reasons. First, whale watching as an activity is increasing in popularity, now being undertaken in every continent (Orams, 1997). Therefore, any results found can be extended elsewhere. Second, the likelihood of having an interaction with a whale in the wild while on a tour is high, so the effects experienced are more likely to be from the interaction, rather than from something else. Third, whales are considered to be 'iconic species' because of their rarity and intelligence (Valentine & Birtles, 2004). Fourth, whale watching is interesting because of the special relationship that humans and cetaceans share (Cloke & Perkins, 2005). In general, human sensitivity toward a species is associated with how much they can relate to that species on an emotional level (Amante-Helweg, 1996). That is, the more one is emotionally connected to an animal, the more likely they are to care about it. According to Amante-Helweg (1996), the simple act of being near wildlife can lead to emotional fulfillment in humans. Furthermore, cetaceans are believed to have human-like qualities, such as social structure and intelligence, which makes them relatable (Amante-Helweg, 1996). They are thought to be particularly charismatic, and evoke a strong sense of fascination amongst humans (Cloke & Perkins, 2005; DeMares, 2000). Experiences with cetaceans specifically have been known to trigger peak experiences in humans (DeMares, 2000). Such peak experiences elicit deep emotions, such as love and joy, which can re-establish one's feeling of connectedness (DeMares, 2000). This is supported by both Jacobs, Vaske, and Roemer (2012), and Curtin and Kragh (2014), who say that the interactions between humans and wildlife can elicit emotions in people, and these emotions can foster a connection back to the object that created them. According to Hughes (2013), the greater the emotional connection to nature or wildlife one feels, the more likely they are to want to protect it. In terms of this research, if participants develop an emotional connection to whales, they will have a greater desire to protect them. This is supported by Amante-Helweg (1996) who writes if humans feel emotionally satisfied

by an experience with wildlife, their feelings about environmental awareness may be enhanced.

1.2 Problem Statement

Nature is degrading at an alarming rate, and we need to find ways to ensure it is protected for generations to come. One such way is by increasing humans' overall happiness through increasing their contact with nature and wildlife. This can be done through activities such as wildlife tourism. More specifically, the activity of whale watching has a high potential to increase happiness because of the special relationship humans and cetaceans share, as well as through the iconic status that whales have. However, exactly the extent to which participating in whale watching can influence happiness is unknown. The theory of positive psychology suggests that humans' overall happiness can be increased through a combination of three paths, namely Pleasure, Meaning, and Engagement. Each path can increase well-being individually, but the greatest increase is through a combination of all three (Schueller & Seligman, 2010). If overall happiness can be increased, then there is also the potential to influence humans' conservation attitudes, subsequently slowing the degradation of nature (Fredrickson, 2001). Therefore, using a positive psychology lens we will be exploring how the activity of whale watching can influence human happiness and how in turn, this has the potential to influence conservation attitudes.

Exploring such an area can have many implications for the conservation and management of nature. First, we can gain a greater understanding of the role viewing wildlife plays in our happiness, and our attitudes towards nature conservation. Second, we can highlight an activity that not only increases the happiness of humans overall but also has the potential to promote nature conservation. Third, we can gain a greater understanding of our ongoing internal processes and utilize this knowledge towards the promotion of nature conservation. Finally, this research will help contribute to a growing body of literature on the effects of human-wildlife interactions.

1.3 Research Questions

The purpose of this research is to identify the relationship between wildlife experiences, specifically whale watching, and conservation attitudes using the theory of positive psychology. Therefore, the following research question was proposed:

To what extent does experiencing whales, through whale watching excursions, influence the conservation attitudes of the participants?

In order to explore this question further, the following research sub-questions have been proposed:

1. *To what extent does experiencing whales, through whale watching excursions, increase happiness?*
 - a. *To what extent does experiencing whales, through whale watching excursions, increase Pleasure?*
 - b. *To what extent does experiencing whales, through whale watching excursions, increase Meaning?*
 - c. *To what extent does experiencing whales, through whale watching excursions, increase Engagement?*
2. *To what extent does an increased well-being influence conservation attitudes?*
 - a. *To what extent does an increased well-being from Pleasure influence conservation attitudes?*
 - b. *To what extent does an increased well-being from Meaning influence conservation attitudes?*
 - c. *To what extent does an increased well-being from Engagement influence conservation attitudes?*

1.4 Outline

The following section will provide a theoretical framework for this research. It will explore the theory of positive psychology and how it relates to wildlife experiences and conservation attitudes. It will conclude with a summary and conceptual model. Next, will be an outline of the methodology used in this research. This will cover the experimental design, study site, sample, questionnaire design, data collection and analysis, and ethical considerations. After the methodology will be the results of the research, followed by a discussion of the results as they pertain to the theoretical framework. Finally, there will be general conclusions and implications of the findings.

2.0 Theoretical Framework

The theory of positive psychology will be used to discuss how wildlife experiences, in the form of whale watching excursions, can influence conservation attitudes. For the purpose of this paper, an attitude is defined as “mental dispositions to respond favorably or unfavorably to an object or event with some degree” (Jacobs & Harms, 2014, p. 124). In the case of conservation attitudes, the object or event would be the conservation of nature and wildlife.

2.1 What is Positive Psychology?

Positive psychology is the study what makes us happy and “what makes life worth living” (Seligman & Csikszentmihalyi, 2000, p. 5). It first emerged in the 1990s in contrast to the study of mental illness, which had been the focus of clinical psychology since World War II (Lee Duckworth, Steen, & Seligman, 2005). It is a branch of psychology that looks to explore how positive experiences, traits, and institutions can lead to a better quality of life (Seligman & Csikszentmihalyi, 2000). Positive experiences are the subjective experiences we have in the past, present and future such as satisfaction, happiness, and optimism, respectively (Seligman & Csikszentmihalyi, 2000). Positive traits are the individual traits that make us who we are, such as courage or the capacity for love (Seligman & Csikszentmihalyi, 2000). Finally, positive institutions are the foundations that lead us to become a more responsible community (Seligman & Csikszentmihalyi, 2000).

2.2 Three Pathways to Happiness

According to Seligman (2002), there are three distinct paths that lead to happiness. These are Pleasure, Meaning, and Engagement (Schueller & Seligman, 2010; Seligman, 2002). Each can be a predictor of well-being, but all three together lead to the greatest level of happiness (Schueller & Seligman, 2010). For the purpose of this paper, happiness can be defined as “...subjective well-being, which is to say, an experiential state that contains a globally positive affective tone” (Baumeister, Vohs, Aaker, & Garbinsky, 2013, p. 505). Well-being can be defined as “optimal psychological experience and functioning...” (Deci & Ryan, 2008, p. 1).

2.2.1 The Pleasant Life

Pleasure or the pleasant life pathway is hedonic (Seligman, Parks, & Steen, 2004). It is about how the experience of positive emotions and the pursuit of pleasure in everyday life can lead to an overall better well-being. (Schueller & Seligman, 2010). It is about satisfying one’s needs, wants and goals to produce a positive emotional state (Baumeister et al., 2013). By increasing one’s positive emotions in the present, their level of happiness can also be increased (Seligman et al., 2004). It is about boosting

positive emotions and reducing negative emotions as much as possible (Lee Duckworth et al., 2005). This path, however, is superficial and rather limited as only a certain range of emotions can be experienced, meaning only a certain level of happiness can be attained (Seligman et al., 2004). In other words, this branch is short-term, and can only increase one's well-being to an extent because emotions are temporary.

2.2.2. The Meaningful Life

Meaning or the meaningful life pathway is about improving one's well-being and achieving happiness through personal growth, and the discovery of purpose and belonging in life (Seligman et al., 2004; van den Born et al., 2018). This is also known as eudemonic value, and it can be found in the relationships we establish and the responsibilities we have to them (Chan et al., 2016; van den Born et al., 2018). This branch is about increasing well-being by being part of something outside of just oneself. It is about understanding one's life beyond the present moment and finding consistent satisfaction (Baumeister et al., 2013). It can be achieved by engaging in social relationships, or by associating with and contributing to something bigger than oneself (Schueller & Seligman, 2010). For example, by being a part of a church or having a strong connection with nature. Furthermore, it can be achieved by promoting selfless activities that express the self and positively affect others (Baumeister et al., 2013). As the name indicates, this pathway satiates one's continual search for meaning and direction (Seligman et al., 2004). Instead of focusing on superficial pleasure, as seen in the pleasant life pathway, this pathway is focused on: "living well, living a complete life or actualizing one's valued potentials targeted at making a difference in the world" (van den Born et al., 2018, p. 844). It is about feelings and experiences taken together across time and associates the past, present, and future (Baumeister et al., 2013).

2.2.3 The Good Life

Finally, engagement, or the good life pathway, is about achieving happiness through the discovery of gratitude (Seligman et al., 2004). By utilizing our strengths and immersing ourselves completely, we can find gratitude (Seligman et al., 2004). It is about finding value in the experience versus finding value in the outcome (Emmons & McCullough, 2003). The discovery of gratitude can cause the experience of positive emotions, which leads to "long-term well-being through promoting positive resources" (Schueller & Seligman, 2010, p. 254). These positive resources can be maintained and used in the future during times of need (Emmons & McCullough, 2003). For example, experiencing gratitude can lead to the development of friendships which can be used later in the future when needed (Emmons & McCullough, 2003). Furthermore, the experience of gratitude can help expand one's mind and think outside the box, which helps to reduce negative emotions such as anxiety (Emmons & McCullough, 2003). In other words, the experience of gratitude can both enhance creativity and problem-solving capacities.

Highly engaging activities lead to the discovery of gratitude through the psychological state of flow (Peterson, Park, & Seligman, 2005). During this state, full attention is placed on the activity and all other senses are lost to the immersive experience (Peterson et al., 2005). One's self-awareness becomes lost, and instead, they are connected with the living world (Curtin, 2009). It is an unemotional and unconscious state that, in the end, is extremely gratifying (Seligman et al., 2004). Furthermore, the momentary escape from reality can have many psychological benefits (Curtin, 2009). Gratifying natural experiences can influence environmental conservation and ecological behaviors and are linked to pro-environmental engagement (Byrka, Hartig, & Kaiser, 2010; Hartig et al., 2007).

2.3 Whale Watching and Positive Psychology

Whale watching can lead to an increased well-being, and subsequently an increased level of happiness through each branch of positive psychology.

2.3.1 Whale Watching and the Pleasant Life

In terms of the Pleasant Life, whale watching has the potential to evoke positive emotions in the participants. Amante-Helweg (1996) states that the simple act of being near wildlife can lead to emotional fulfillment in humans. Jacobs et al. (2012) write that when individuals have spontaneous encounters with wildlife, these encounters can create strong emotions that the individuals do not forget. Fredrickson (2001) writes that experiencing positive emotions can expand both our thoughts and actions and can improve our resources. She also suggests that the experience of positive emotional states can improve psychological well-being and can have an undoing effect on negative emotions (Fredrickson, 2001). That is, the experience of positive emotions can help wipe out any negative emotions one might be feeling. In terms of this research, if the participants are feeling any negative emotions at the time of the whale watching excursion, the evocation of positive emotions would help to diminish them. This, in turn, would influence the participants' reports according to the Pleasure dimension of happiness, as the pleasant life is about boosting one's positive emotions and reducing their negative emotions as much as possible (Lee Duckworth et al., 2005). Fredrickson and Joiner (2002, p. 174) state that "positive emotions can trigger an upward spiral toward enhanced emotional well-being." Therefore, if the participants experience positive emotions on the whale watching excursion, they could feel more positive emotions in the future.

The Pleasant life is about positive emotions and finding consistent short-term satisfaction in the present (Baumeister et al., 2013). This short-term increase in well-being can cause individuals to feel like they are getting something out the activity that is causing the emotional well-being (Schueller & Seligman, 2010). In terms of this research, if the whale watching excursion causes the participants to feel a short-term

increase in well-being, they, in turn, would feel like they are getting something out of the activity. The participants would be motivated to continue feeling that way, which could lead to higher reports in the Pleasure dimension of happiness.

While not immediately connected to experiencing wildlife itself, it is possible for the participants to increase their well-being in the Pleasure dimension of happiness because they feel a social connection to others. According to Baumeister et al. (2013), social connection to others has been linked to increased happiness. Therefore, being on a boat with other people could potentially give the participants the social interaction that they need, which could consequently increase their reports of happiness according to the Pleasure dimension.

Increasing one's happiness through the Pleasure dimension can influence their conservation attitudes in various ways. First, positive emotional states, according to Fredrickson (2001), can lead to an increased well-being and influence one's behavior in the moment. Hughes (2013) supports this when she writes the experience of positive emotions can also influence one's behavior. She continues that in general, emotional engagement with wildlife can encourage the participants' intentions to engage in conservation practices (Hughes, 2013).

Second, wildlife experiences can cause the participants to feel the emotions of wonderment and awe (Curtin, 2009). More specifically, whale watching has been known to elicit these emotions in the participants (DeMares, 2000). Whales can elicit such emotions because they are considered magical due to their size, wildness, and vulnerability (Clove & Perkins, 2005). This is important because if the participants feel the emotions of wonderment and awe, they are more likely to report increases in behavioral intentions (Hughes, 2013). Furthermore, feeling wonder about the animal viewed can lead to a greater desire to protect that animal (Hughes, 2013). As such, if the participants feel the emotions of wonderment and awe, then they would feel a greater desire to protect the wildlife that caused them to feel this way. Finally, Jacobs et al. (2012) write that it is our emotions that govern our motivations and inherently influence our attraction to wildlife and the decisions we make in regard to them. This is important because the greater attraction we feel towards something, the more likely we are to protect it (Schultz, 2000). In this case, experiencing whales through the whale watching excursion could cause the participants to feel a greater attraction to the whales, therefore leading them to want to protect them more.

2.3.2 Whale Watching and the Meaningful Life

In terms of the Meaningful Life, purpose can be found in the relationships that we establish, including our relationship to nature (Chan et al., 2016). In general, a relationship with nature can be established by spending more time in nature (Nisbet, Zelenski, & Murphy, 2008). If the participants experience emotions while in nature, this

can cause a connection back to the object that created them (Curtin & Kragh, 2014; Jacobs et al., 2012). Encounters with nature, as well as with animals can cause individuals to have peak experiences (Curtin, 2009). Peak experiences are experiences which are extraordinary, include intense joy and are described as “moments of highest happiness and fulfillment” (Maslow, 1962, p. 69; Privette, 1983). Peak experiences have mystic properties and involve losing oneself in the moment (Privette, 1983). Cetaceans, such as whales, have been known to elicit such experiences in humans and these experiences can help re-establish one’s feelings of connectedness (DeMares, 2000). By embracing this connection, the participants can have more meaningful lives (Nisbet et al., 2008). This, in turn, would lead to improved well-being and an overall increase in happiness.

Peak experiences, however, are considered rare, and as such, other things can also improve well-being according to the Meaning dimension (Maslow, 1964). Schueller and Seligman (2010) suggest that meaning can be found by associating with something bigger than oneself. In terms of this research, being out on the ocean, surrounded by vast nature and majestic animals could cause the participants to feel like they were part of something much bigger than themselves. It could help them to realize their role and where they fit in the big scheme of things. Encounters such as these can open up connections with both whales and nature (Cloke & Perkins, 2005). This sense of connection with something bigger can give the participants meaning in their lives and subsequently improve their well-being (Curtin, 2009). This conclusion is further supported by Baumeister et al. (2013), who suggests that meaning can be found when an individual feels part of something outside of themselves.

Baumeister et al. (2013) also suggest that meaning in life, or having a meaningful life, associates events from the past, present, and future, and that meaning can be found by integrating the past and future with the present. It has also been suggested that the relationship one had with nature as a child is important for their connection with nature later in life (van den Born et al., 2018). Therefore, taken together, another possible way that whale watching could improve participants well-being, according to the Meaning dimension, is by reminding them of their past. This is especially important if their past was associated with a strong connection to nature. This link to the past could lead them to find more meaning in the experience.

Finally, perhaps it is not just the activity itself that can help the participants find meaning. Baumeister et al. (2013) suggest that people can find meaning from making positive contributions to other people. If the participants opted to tip the crew at the end of the excursion, this could be considered making a positive contribution to others, and therefore, could increase their sense of meaning. Furthermore, knowing that by helping the crew, they are indirectly helping the whales, could also increase meaning.

The Meaningful Life can influence conservation attitudes in various ways. The activity of whale watching has the potential to evoke peak experiences in the participants, which could increase their connection to nature. According to van den Born et al. (2018) connectedness is frequently mentioned as a main motivation to engage in actions for nature. Engagement with nature can be an “epiphany of self-realization” and can cause people to “feel very much in touch with both themselves and with the world around them, which provokes an intense feeling of delight” (Curtin, 2009 pg. 461). As stated previously, the more in touch someone feels with something, the more likely they are to engage in behaviors to ensure its protection (Schultz, 2000). In terms of this research, if the participants feel a connection to nature through the whale watching excursion, then an increase in their conservation attitudes would make sense. This is because they would feel that they are a part of something, and they would be more likely to ensure it is protected. Furthermore, Prati, Albanesi, and Pietrantonio, (2017) write that an increase in well-being, through finding meaning, encourages people to think and act more selflessly, instead opting to focus more on something that will help the greater good. If this is indeed the case, then an increase in well-being experienced by the whale watching participants could cause them to feel less selfish and encourage them to act in ways that would help the environment, in this case, the whales. This idea is supported by Baumeister et al. (2013) who writes that the discovery of meaning is related to self-identity and what activities reflect the self, which would involve contributing to things that help others. This discovery of the self could increase the participants' well-being and cause them to think more about how their actions influence others. This, in turn, could encourage less materialism and a stronger focus on selfless activities such as protecting the environment (Baumeister et al., 2013; Prati et al., 2017).

Another reason for a potential relationship between the Meaning dimension of happiness and whale conservation attitudes is through reflection and contemplation. Curtin (2009) states that being an observer of an animal in its natural environment, but not being a participant, can increase the intensity of the experience and encourage contemplation. Additionally, extended experiences with wildlife can evoke a strong sense of contemplation and change (Curtin, 2009). Hughes (2013, p. 53) writes that reflection “...engenders emotional reactions that reinforce existing conservation views and prompt awareness of the need for action.” Taken in the context of this research, if the whale watching excursion encourages contemplation and reflection amongst the participants, then this could result in a change to their conservation attitudes.

2.3.3 Whale Watching and the Good Life

In terms of the Good Life, whale watching has the potential to lead participants to have a peak experience when they see the whales. As stated above, cetaceans, such as whales, have been known to elicit peak experiences in humans (DeMares, 2000). After a peak experience, individuals tend to feel extremely fortunate and gracious (Maslow,

1964). This is supported by Seligman et al. (2004) who writes that complete immersion in an activity can help us find gratitude. It is this experience of gratitude that can lead to an increase in happiness through the Good Life. Furthermore, peak experiences share a special relationship with the psychological state of “flow” (Curtin, 2009).

Whale watching has the potential to cause the participants to enter into the state of “flow”. The state of “flow” allows the participants to lose themselves in the experience and to enter “the orchestra of nature”(Curtin, 2009, p. 460). Encounters with wildlife can cause participants to become completely absorbed in the experience, so much that all of their senses are heightened as they focus on the moment with the wildlife (Curtin, 2009). This complete sensory involvement with nature can lead to the experience of profound happiness and great satisfaction (Curtin, 2009). If the participants do indeed become fully engaged in the activity, then it is suggested by Seligman et al. (2004) that they could find gratitude in the experience, and subsequently, their overall well-being would be improved. However, certain people are anticipated to be unable to experience the state of “flow” due to their lack of competencies when it comes to wildlife experiences (Curtin, 2009). In this research, it is expected that there will be many individuals who have never gone whale watching before or originated from countries where interactions with wildlife are less common. As such, there is a high likelihood that certain individuals may not have the skills to experience the wildlife fully, compared to those who had previous wildlife experience. This would have resulted in an increased likelihood of them experiencing anxiety, stress or frustration, which in turn may have left them feeling self-conscious. This self-conscious state would prevent them from experiencing “flow” and reporting less in the Engagement dimension (Curtin, 2009).

The Good Life relates to conservation attitudes in two main ways. The first way is through the restorative properties of nature. It has been suggested that gratifying experiences in nature have the potential to influence environmental concern and ecological behaviors (Hartig et al., 2007). This is because experiences in nature have been known to be highly restorative (Hartig et al., 2007). That is, experiences in nature have been known to help restore one’s adaptive resources, which can be personally gratifying and can lead to continuous well-being and the promotion of environmental concern (Hartig et al., 2007). Byrka et al. (2010) write that the more restoring an environment is, the more the individuals would want to protect it. In terms of this research, if the participants on the whale watching excursion find the experience restorative, then they would feel gratitude and have their well-being increased. If the participants feel more restored after going on the whale watching excursion, this could motivate them to act more environmentally, and as such, they would record higher in the whale conservation attitudes and intentions.

The second way that the Good Life can relate to conservation attitudes is through the act of reciprocity. Finding gratitude can lead to an increased well-being, and can cause

humans to feel better about their lives in general (Emmons & McCullough, 2003). Goei and Boster (2005) state that an increased well-being through the discovery of gratitude can influence individuals to reciprocate that gratitude by helping whatever made them feel that way. This is supported by Prati et al. (2017), who suggest that individuals who are socially thriving are more likely to reciprocate those feelings to society by acting more environmentally. In terms of this research, if the participants experience gratitude after going on the whale watching excursion and increase their well-being, then this could encourage them to reciprocate those feelings towards the thing that made them feel that way, in this case, the whales. This could subsequently influence the participants' attitudes towards whale conservation.

2.4 Summary

In summary, the theory of positive psychology is the study of what makes life worthwhile (Seligman & Csikszentmihalyi, 2000). It states that three pathways to happiness exist, that each can be a predictor of well-being, but together they lead to the greatest level of happiness (Schueller & Seligman, 2010). Pleasure or the Pleasant Life is about how the experience of positive emotions can lead to an increased well-being. Meaning or the Meaningful Life is about how the pursuit of purpose can increase well-being. Finally, Engagement or the Good Life is about how finding gratitude can increase well-being. Wildlife experiences, such as whale watching, have the potential to increase well-being through each pathway, which in turn can influence conservation attitudes.

2.5 Conceptual Model

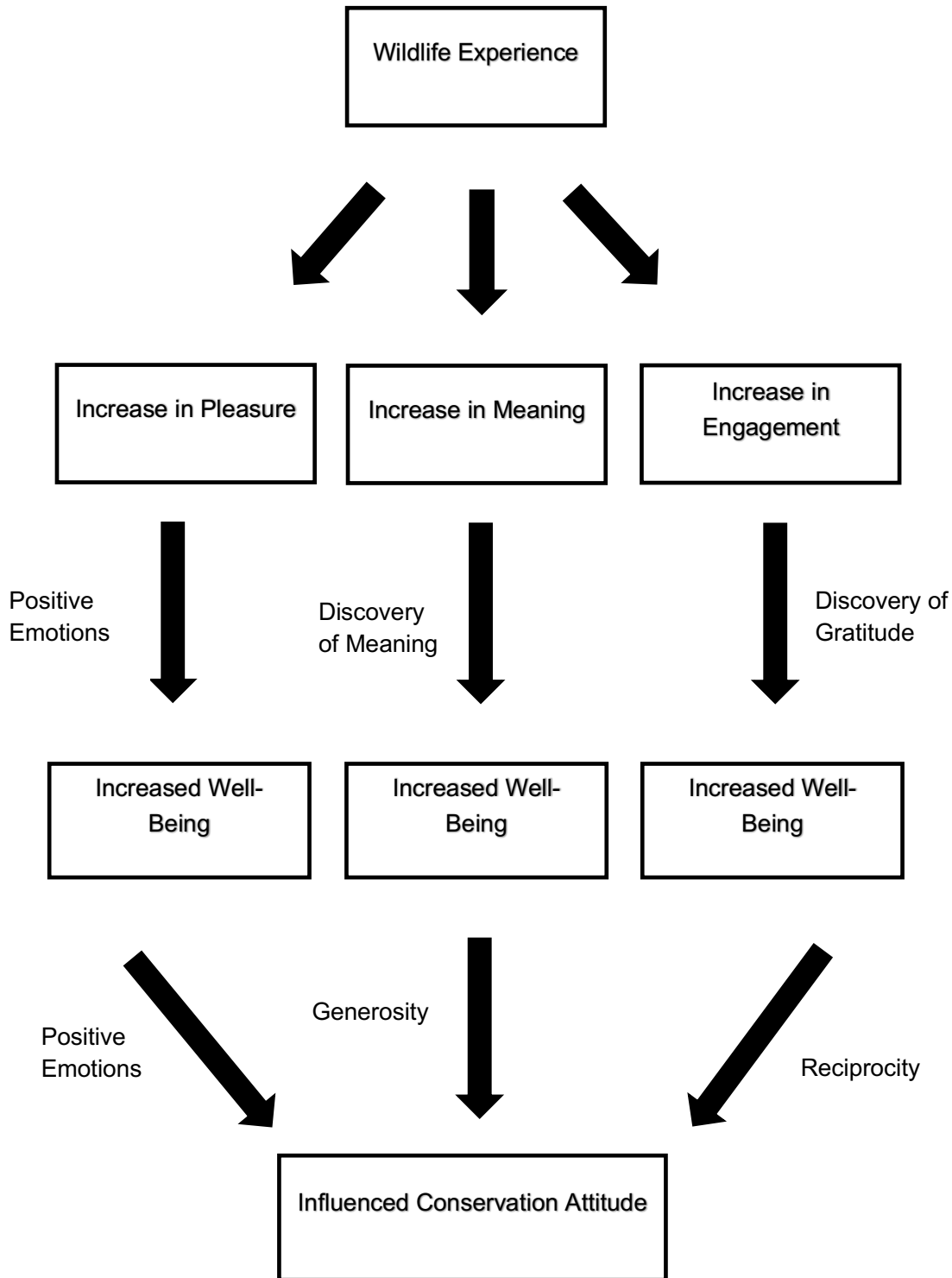


Figure 1. Conceptual model of positive psychology paths related to well-being and conservation attitudes.

3.0 Methods

This section will provide an overview of the methodology used in this research. This experimental field research took place in October 2018 in Victoria, British Columbia, Canada. This research utilized a “one group pretest-posttest” model and collected data through the use of questionnaires. After data collection was completed, statistical analysis was conducted using SPSS.

3.1 Experimental Design

For this study, an experimental field research was completed. Field research, which is research done in a real-world setting, is superior to laboratory studies, as real-world settings increase validity (Aziz, 2017; Jacobs & Harms, 2014). Furthermore, field research increases the generalizability of the research to real-world situations (Aziz, 2017). The design of this research was a “one group pretest-posttest”. “One group pretest-posttest” designs are typically used to measure the changes in the dependent variable of the same group of people at different times (Kirk, 2007).

3.2 Study Site

This research was conducted in Victoria, British Columbia throughout the month of October 2018. Victoria was chosen for its large population of orcas (*Orcinus orca*), both transient and resident, as well as its populations of humpback whales (*Megaptera novaeangliae*) and grey whales (*Eschrichtius robustus*) (Lawrence, Phillips, & Hardy, 1999). The research was conducted with participants from the company “Eagle Wing Whale & Wildlife Tours” (“Eagle Wing Tours”). Eagle Wing Tours is located in Fisherman’s Wharf in downtown Victoria. According to their website, they are the number one whale watching company in Victoria, and have been for the last ten years (“Eagle Wing Tours,” n.d.). Eagle Wing Tours promotes the conservation of wildlife through discussions with participants on the tours (“Eagle Wing Tours,” n.d.). This company was chosen for their conservationist approach, meaning they speak to participants about whale and wildlife conservation, as well as their extended whale watching seasons, which guarantees seeing whales until the beginning of November. Eagle Wing Tours was initially contacted in July 2018, along with seven other companies in the Victoria area via email. They showed an interest in participating in the research, so a follow-up call was completed.

3.3 Sample

In total, 138 participants filled out both the pretest and posttest questionnaires. In terms of participants’ age, there were 17 participants who reported being in the 18-24 age group, accounting for 12.3% of the total sample; there were 29 participants who reported being in the 25-34 age group, accounting for 21.0% of the total sample; there were 37 participants who reported being in the 35-44 age group, accounting for 26.8% of the total

sample; there were 22 participants who reported being in the 45-54 age group, accounting for 15.9% of the total sample; there were 18 participants who reported being in the 55-64 age group, accounting for 13.0% of the total sample; and finally there were 15 participants who reported being in the 65+ age group, accounting for 10.9% of the total sample. From this, we can determine that the largest reported age group is 35-44, and the smallest reported age group is 65+. In terms of the participants' gender, there were 51 participants who reported *Male*, accounting for 37.0% of the total sample; there were 85 participants who reported *Female*, accounting for 61.6% of the total sample; there was 1 participant who reported *Other*, indicating a gender other than male or female, accounting for 0.7% of the total population; and finally there was 1 participant who elected not to report their gender on the pretest questionnaire, accounting for 0.7%. In terms of the participants' country of origin, there were 40 participants who reported originating from *Canada*, accounting for 29.0% of the total sample; there were 51 participants who reported originating from the *United States*, accounting for 37.0% of the total sample; there were 46 participants who reported *Other*, indicating they originated from somewhere other than Canada or the United States, accounting for 33.3%; finally there was 1 participant who elected not to report their country of origin, accounting for 0.7%.

In terms of the excursions, a total of 12 whale watching excursions went out during the data collection of this research. Of the 12 excursions, 10 had sunny weather (83.3%), while 2 had cloudy weather (16.7%); 10 went out in the morning (83.3%), while 2 went out in the afternoon (16.7%); and finally 3 tours saw below average number of whales (25.0%), 6 tours saw an average number of whales (50.0%), and 3 tours saw above average number of whales (25.0%). There were no tours that did not see whales.

3.4 Questionnaire Design

In order to answer the research question, questionnaires were designed based on a literature review. The purpose of the questionnaire was to measure the participants' happiness, as well as their attitudes and intentions towards whale conservation. Happiness was measured using the three branches of the theory of positive psychology as described by Seligman et al. (2004) and Schueller and Seligman (2010). These are Pleasure, Meaning, and Engagement. Questionnaire items were developed using the *Orientation to Happiness Scale* by Peterson et al. (2005). It measures how participants feel about their place in life, what is important in life, and just life in general (Peterson et al., 2005). On the pretest questionnaire, four items from each branch were selected and assessed on a 7-degree Likert scale (i.e. 1 - strongly disagree and 7- strongly agree). Likert scales are appropriate to use because they are reliable, effective, and easy to administer (Mayer & Frantz, 2004). The posttest questionnaire had two of the four items from each branch removed, leaving two items from each branch remaining. This was done to reduce the length of the posttest survey so that it was faster for participants to fill out. Additionally, two items relating to participants attitudes toward whale conservation,

two items relating to their intentions towards whale conservation and one item related to overall happiness were used on both the pretest and the posttest. Whale conservation attitude items were developed using the study by Marseille, Elands, and van den Brink (2012). Whale conservation intention items were developed using the study by Jacobs and Harms (2014). The single item related to happiness was rated on a scale of 0-10, with 0 being “not at all” and 10 being “completely”. Additionally, the pretest had general demographic questions, as well as questions about previous whale watching experiences. These were asked to gauge information about the sample. These questions were removed on the posttest questionnaire. One question about participants satisfaction with the whale watching excursion was asked in the posttest questionnaire. This question was rated on a scale of 0-10, with 0 being “not at all” and 10 being “completely”. Lastly, participants were asked to write their first name on the top of both questionnaires for matching purposes.

Questionnaires were administered to participants prior to embarking on the whale watching excursion (pretest). Participants then went on the excursion, where they were subjected to seeing the whales (treatment) and then the questionnaires were administered immediately after arriving back to dock (posttest). Questionnaires gauged the participants' whale conservation attitudes and intentions and their level of happiness both before the whale watching excursion and after. A copy of both the pretest and posttest questionnaire can be found in Appendix 2.

3.5 Data Collection

As mentioned above, the data for this research was collected using questionnaires.

Participants were chosen using purposive sampling. More specifically, they were chosen based on their participation in whale watching excursions with Eagle Wing Tours and their willingness to fill out the questionnaires. Questionnaires were first administered before the whale watching excursion. Participants were asked to sign-in for their whale watching excursion approximately 45 minutes before the scheduled departure time. Participants would approach the front desk, where they would be required to fill out a waiver for the whale watching excursion. Once they had finished filling out the waiver, participants were advised of the questionnaire by the Eagle Wing Tours staff. Participants were then approached by the researcher where they would be asked if they were willing to fill out a questionnaire about whale watching and happiness. If the participant agreed, the questionnaire would be administered. If the participant disagreed, the questionnaire would not be administered. While participants filled out the questionnaire, they were advised that this was a two-part questionnaire, with the first part happening now, and the second part happening immediately after they returned from the excursion. Once participants had completed the pretest questionnaire, the questionnaire would be filed based on the date and time of the excursion. Questionnaires would continue to be

administered until the Eagle Wing Tour staff began their pre-trip explanation, which was about 15 minutes before the scheduled departure time.

The posttest questionnaire was administered immediately after the participants returned from the excursion. Eagle Wing Tours staff were asked the approximate time that the excursion was expected to return. Once the boat returned, participants who had filled out the pretest questionnaire were approached on the dock and asked if they would be willing to fill out the second half of the questionnaire. Those who were willing were provided the questionnaire.

Pretest and posttest questionnaires were then matched using the first names of the participants. The date and time of the excursion were recorded in the top corner of each questionnaire in order to keep them organized.

After all the participants had filled out the questionnaire, Eagle Wing Tours staff who had just been on the excursion were asked to rate the experience from 0-3, with 0 being no whales seen, 1 being below average whales seen, 2 being average whales seen and 3 being above average whales seen. The purpose of doing this was to provide context to the results shown by the questionnaires. This data was then recorded, along with the weather, the date and time of the excursion, and the number of pretest and posttest surveys received.

3.6 Data Analysis

After the data was collected, it was coded and then entered into SPSS.

Descriptive statistics, in the form of frequency tests, were completed to understand sample demographics. Demographics included *Age*, *Gender*, *Country of Origin*, and *Previous Whale Experience*. Frequency tests were then conducted on variables relating to the excursions including *Time of Day*, *Weather*, and *Rating*.

An exploratory factor analysis using principal component factor extraction and varimax rotation was conducted on the 12 items of the *Orientation to Happiness Scale*. Exploratory factor analyses are done to see whether ones measurable variables can be reduced to a smaller number of unobservable variables that share a common variance (Yong & Pearce, 2013). That is, the purpose is to try and determine if certain variables in the data go together. Variables with an Eigenvalue greater than one were extracted. As happiness can be divided into three different dimensions, namely Pleasure, Meaning, and Engagement, a three-factor solution was expected. As these dimensions were not found right away, experimentation with the items was done to see if they could be made to fit into the dimensions according to the *Orientation to Happiness Scale*.

Using the results from the factor analysis, an alpha reliability test was completed on each dimension of the *Orientation to Happiness Scale*. Alpha reliability tests are done to

test the internal consistency of items (Tavakol & Dennick, 2011). That is, to see if the items in a scale all measure the same thing. Additionally, the alpha reliability test was also conducted on the *Whale Conservation Attitudes Scale*.

Next, scales were computed in SPSS to make multi-dimensional variables (i.e. they were made up of multiple questionnaire items) into single items. From here, the Gain scores between to the pretest and posttest results were calculated in SPSS. A paired samples t-test was then conducted on all 11 paired pretest and posttest items, namely the four *Whale Conservation Attitude Scale* items, the six matched *Orientation to Happiness Scale* items and the overall happiness rating item. Paired samples t-tests are to be used “when there is one measurement variable and two nominal variables” (McDonald, 2014, p. 181). In this case, the measurement variable is each pretest and posttest questionnaire item, the nominal variables are each participant, and the “before” and “after” the treatment. This was done to determine if there was a statistically significant difference in these variables between the pretest and posttest data.

Multiple regression analyses were then done to determine whether the independent variable was a predictor of the dependent variable. Specifically, regression analysis with mediation was conducted according to the procedure outlined by Baron and Kenny (1986). This was done to measure if the independent variable (the number of whales seen) predicted the dependent variable (gain in conservation attitudes) through a mediator (gain in one dimension of happiness).

In order for mediation to occur, Baron and Kenny (1986) suggest that three conditions must be met, according to three different paths.

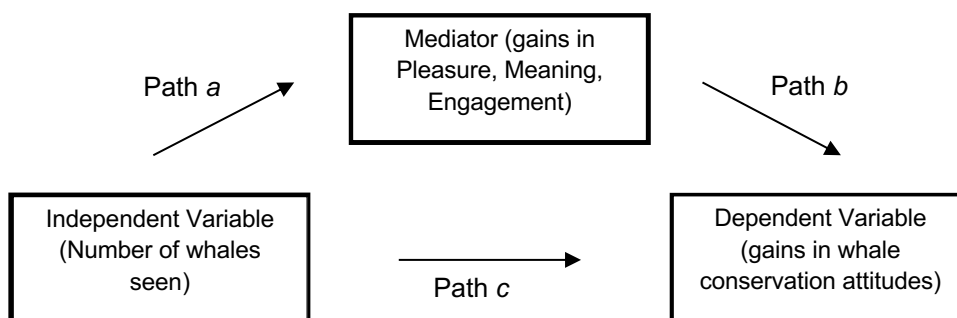


Figure 2. Mediation pathways according to Baron and Kenny (1986).

Condition 1) states that “variations in levels of the independent variable significantly account for variations in the presumed mediator (i.e., Path a)” (Baron & Kenny, 1986, p. 1176). For this condition, this meant running a simple linear regression analysis on the independent variable (number of whales seen) and each of the mediators (the gains in each dimension of happiness, namely Pleasure, Meaning, and Engagement). Linear regression analysis measures the degree to which one variable is associated with or

predicts another variable (McDonald, 2014). Therefore, a simple regression analysis was run on the number of whales seen and each dimension of happiness,

Condition 2) states that “variations in the mediator significantly account for variations in the dependent variable (i.e., Path *b*)” (Baron & Kenny, 1986, p. 1176). For this condition, this meant running a simple linear regression between the mediators (the gains in each dimension of happiness, namely Pleasure, Meaning, and Engagement) on the dependent variable (gains in whale conservation attitudes).

Condition 3) states that “when Paths *a* and *b* are controlled, a previously significant relation between the independent and dependent variables is no longer significant, with the strongest demonstration of mediation occurring when Path *c* is zero” (Baron & Kenny, 1986, p. 1176). For this condition, a significance test must be done on direct Path *c* first (Zhao, Lynch Jr., & Chen, 2010). For that reason, a simple linear regression was conducted on the independent variable (seeing whales) and the dependent variable (gain scores of whale conservation attitudes).

Upon determining the results of the above regression analyses, additional simple linear regression analyses were completed to determine what other variables might have been predictors for a gain in attitudes.

3.7 Ethical Considerations

Whale watching participants' participation in this research was completely voluntary. They were asked for consent prior to filling out the questionnaires and were informed about the nature of the research they were electing to participate in. If any participants were uninterested in participating, they were no longer pursued.

Participants' identity in this research was kept anonymous. While they were asked to report their first names, this was strictly for the purpose of matching the pretest and posttest questionnaires. Once matched, each participant was assigned a number to ensure their identity stayed anonymous.

4.0 Results

Various statistical tests including factor analysis, alpha reliability, paired samples t-test, and regression analysis were conducted on the data generated from this research. The following section will cover the results of these analyses.

4.1 Orientation to Happiness Factors

To determine whether or not the data could be grouped together according to the three dimensions of happiness, a factor analysis was completed on the *Orientation to Happiness Scale* data. The results showed three factors, which correlated to each of the dimensions as described by Seligman (2002). Factor 1 was labeled *Meaning* because the four items that loaded high on this factor were all based on the Meaning dimension of happiness, namely: *I want to make the world a better place; In choosing what to, I always take into account whether it will benefit the environment; What I do matters to society; My life serves a higher purpose*. Factor 2 was labeled *Pleasure* because the three items that loaded high on this factor were all based on the Pleasure dimension of happiness, namely: *Life is too short to postpone the pleasures it can provide; "Life is short, eat dessert first"; In choosing what to do, I always take into account whether it will be pleasurable*. Factor 3 was labeled *Engagement* because the two items that loaded high on this factor were all based on the Engagement dimension of happiness, namely: *I am rarely distracted by what is going on around me; I enjoy activities and situations that challenge my skills and abilities*. Details of how each item loaded and what their Eigenvalues and communalities are can be found in Table 1.

It is important to note that three items were removed from the factor analysis, namely Pleasure1, Engage1, and Engage4. This is because these three items loaded heavily on the incorrect factors. While the exact reason for this is not known, it is possibly due to the unclear wording of these items.

The communalities of the variables extracted were all relatively high, ranging from 0.498 to 0.773. This indicates that the items are well represented by the extracted factors. The KMO value =0.761, meaning that distinct and reliable factors were produced (Yong & Pearce, 2013). Bartlett's Test of Sphericity had a $p < 0.00$, meaning it was significant and showed patterned relationships (Yong & Pearce, 2013)

	Factor 1	Factor 2	Factor 3	Communalities
Meaning3	.839	.065	-.115	.722
Meaning1	.743	.308	-.035	.648
Meaning4	.702	.067	-.020	.498
Meaning2	.648	.101	.402	.591
Pleasure2	.277	.778	.151	.706
Pleasure3	-.032	.772	-.215	.643
Pleasure4	.143	.762	.141	.621
Engage2	-.143	-.026	.867	.773
Engage3	.408	.492	.501	.660
Eigenvalue	3.298	1.397	1.172	
% of total variance	36.589	15.520	13.024	
Total Variance			65.134%	

Table 1. Factor Analysis Table for Orientation to Happiness

4.2 Orientation to Happiness Reliability

To determine whether or not each dimension of the *Orientation to Happiness Scale* was internally reliable, an alpha reliability test was conducted on each of the three dimensions. The scales for two of the dimensions of happiness, namely Pleasure ($\alpha=0.691$) and Meaning ($\alpha=0.727$) were found to be reliable, which means that they are internally consistent. The scale of the Engagement dimension was found to have low reliability ($\alpha=0.321$), which means that it was not internally consistent. The low reliability of the Engagement dimension is possibly due to the low number of items used in the scale. The correlations of the Pleasure dimension were all relatively high, ranging from 0.369 (between Pleasure3 and Pleasure4) and 0.513 (between Pleasure2 and Pleasure4), and all exhibited positive correlations. This means that they all measured a single concept. The correlations of the Meaning dimension correlations ranged from 0.266 (between Meaning2 and Meaning4) to 0.530 (between Meaning1 and Meaning3) and all items correlated positively. This means that they all measured a single concept.

Finally, the Engagement dimension scale had a positive correlation between the two items (Engage2 and Engage3) of 0.204.

4.3 Whale Conservation Attitudes Reliability

To determine whether or not the *Whale Conservation Attitudes Scale* was internally reliable, an alpha reliability test was also conducted on the four scale items. This scale was found to have high reliability ($\alpha=0.889$), meaning the items were internally consistent. The correlations between the items were all high, ranging from 0.551 (between WC2 and WC4) and 0.767 (between WC1 and WC2) and all exhibited positive correlations. This means they all measured a single concept.

4.4 Changes in Happiness and Conservation Attitudes after Whale Watching Excursion

In order to try and understand whether or not the whale watching experience influenced the participants' happiness and conservation attitudes, paired samples t-tests were conducted. In total, there were 11 pairs of matched questionnaire items between the pretest and the posttest. Table 2 below shows the changes in the totals for each of the three dimensions of happiness.

Item	Pretest Mean	Pretest Standard Deviation	Posttest Mean	Posttest Standard Deviation	Gain Mean	df	t	p
PleasureTotal	12.029	1.887	12.435	1.763	0.406	137	-2.638	0.009
MeaningTotal	10.372	2.190	11.226	2.196	0.854	136	-6.446	0.000
EngagementTotal	10.912	2.096	11.816	1.871	0.904	135	-5.004	0.000

Table 2. Results of the paired samples t-test for the three dimensions of the Orientation to Happiness Scale.

4.4.1 Changes in the Pleasure Dimension

In order to help answer research sub-question 1a) *to what extent does experiencing whales, through whale watching excursions, increase Pleasure*, a change in the Pleasure dimension had to occur. Therefore, a paired samples t-test was conducted on the Pleasure dimension of happiness. Participants' feelings according to this dimension of happiness were high on both the pretest and the posttest, the highest of all three dimensions. However, there was still a significant difference found from before the participants went on the excursion (M= 12.029, SD= 1.887) when compared to after (M=12.435, SD=1.763). This means that the whale watching excursion had an influence on the participants' levels of Pleasure. The mean scores recorded on the posttest increased by 0.406 or 3.4% compared to the pretest. The changes seen in the Pleasure

dimension were the smallest when compared to the Meaning and the Engagement dimensions. A more detailed analysis can be found in Table 2. Figure 3. shows what the differences were between each of the items in the Pleasure dimension, as well as the overall change.

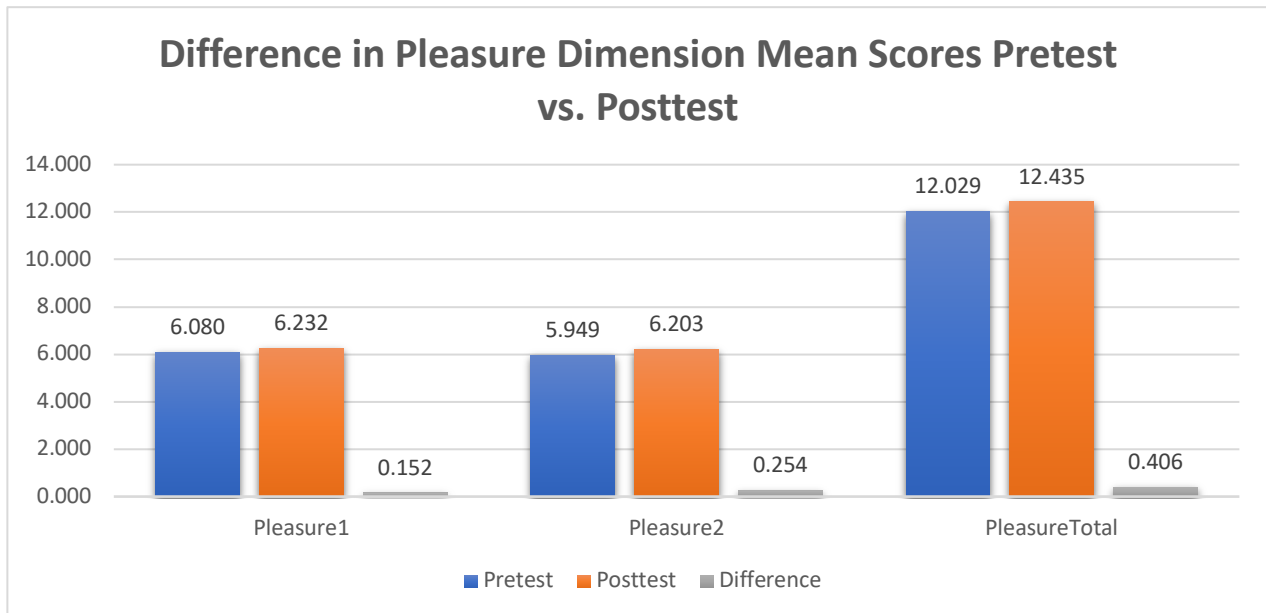


Figure 3. Differences in mean scores between pretest and posttest for Pleasure dimension items and total

4.4.2 Changes in the Meaning Dimension

In order to help answer research question 1b) *to what extent does experiencing whales, through whale watching excursions, increase Meaning*, a change in the Meaning dimension had to occur. Therefore, a paired samples t-test was conducted on the Meaning dimension of happiness. Participants' feelings according to this dimension of happiness were relatively high on both the pretest and the posttest, albeit less high than both the Pleasure and Engagement dimensions. There was a significant difference found from before the participants went on the excursion ($M= 10.372$, $SD= 2.190$) when compared to after ($M=11.226$, $SD=2.196$). This means that the whale watching excursion had an influence on the participants' happiness in terms of Meaning. The mean scores recorded on the posttest increased by 0.854 or 8.2% compared to the pretest, making it higher than the Pleasure dimension but lower than the Engagement dimension. A more detailed analysis can be found in Table 2. Furthermore, Figure 4. shows what the differences were between each of the items in the Meaning dimension, as well as the overall change.

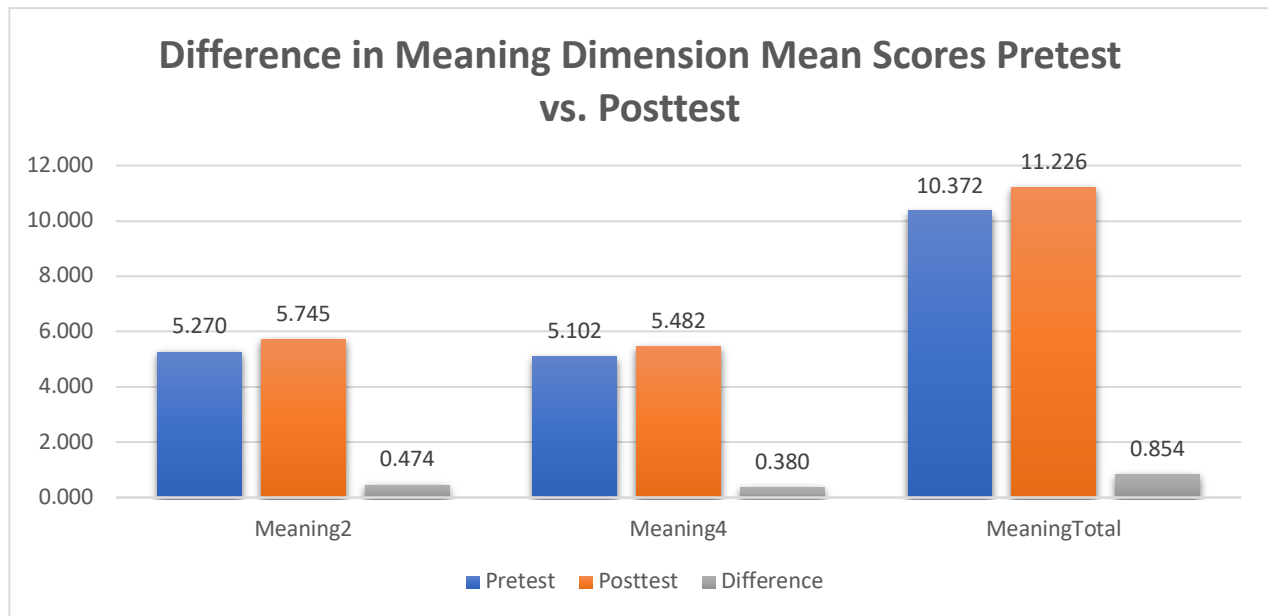


Figure 4. Differences in mean scores between pretest and posttest for Meaning dimension items and total

4.4.3 Changes in the Engagement Dimension

In order to help answer research question 1c) *to what extent does experiencing whales, through whale watching excursions, increase Engagement*, a change in the Engagement dimension had to occur. Therefore, a paired samples t-test was done on the Engagement dimension of happiness. Participants' feelings according to this dimension of happiness were relatively high on both the pretest and the posttest, higher than the Meaning dimension, but lower than the Pleasure dimension. There was a significant difference found from before the participants went on the excursion ($M = 10.912$, $SD = 2.096$) when compared to after ($M = 11.816$, $SD = 1.870$). This means that the whale watching excursion had an influence on the participants' happiness in terms of Engagement. The mean scores recorded on the posttest increased by 0.904 or 8.3% compared to the pretest. A more detailed analysis can be found in Table 2. Furthermore, Figure 5. shows what the differences were between each of the items in the Meaning dimension, as well as the overall change.

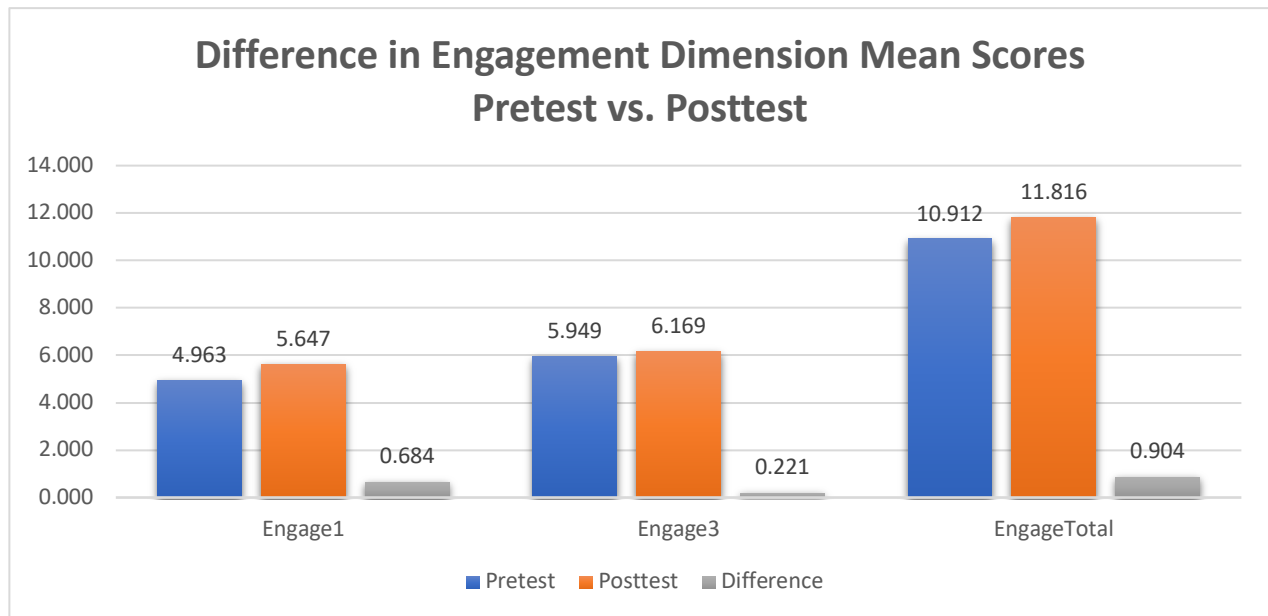


Figure 5. Differences in mean scores between pretest and posttest for Engagement dimension items and total

4.4.4 Changes in Overall Happiness

The overall happiness reported by participants on both the pretest and the posttest was very high. There was, however, a significant difference between the two questionnaires. Overall happiness was higher after the excursion on the posttest ($M=9.337$, $SD=0.897$) compared to before the excursion on the pretest ($M=8.211$, $SD=1.522$). A more detailed analysis can be found in Table 3. below. The changes between pretest and posttest mean that going on the excursion itself influenced the participants' overall happiness significantly with a difference of 1.126 or 13.7%.

Item	Pretest Mean	Pretest Standard Deviation	Posttest Mean	Posttest Standard Deviation	Gain Mean	df	t	p
Happy	8.211	1.522	9.337	0.897	1.126	134	-8.849	0.000

Table 3. Results of the paired samples t-test for the overall happiness item.

4.4.5 Changes in Conservation Attitudes

In order to help answer the overall research question: *to what extent does experiencing whales, through whale watching excursions, influence the conservation attitudes of the participants*, data from the pretest and posttest questionnaires were compared using a paired samples t-test. The whale conservation attitudes recorded by the participants were all relatively high on both the pretest and the posttest. There was a significant difference found between the whale conservation attitudes recorded on the pretest,

before going on the excursion (M=21.662, SD=4.794), compared to the posttest, after going on the excursion (M= 22.978, SD= 3.699). The mean scores recorded on the posttest increased by 1.316 or 6.1% compared to the pretest. This means that the whale watching excursion had an influence on the participants' whale conservation attitudes. The biggest changes seen was between participants' intentions to donate money to a project that protects whales. A detailed analysis can be found in Table 4.

Item	Pretest Mean	Pretest Standard Deviation	Posttest Mean	Posttest Standard Deviation	Gain Mean	df	t	p
WC1	6.125	1.341	6.279	0.823	0.154	135	-1.411	0.160
WC2	5.507	1.414	5.816	0.990	0.309	135	-2.741	0.007
WC3	5.397	1.421	5.713	1.154	0.316	135	-2.792	0.006
WC4	4.632	1.354	5.169	1.280	0.537	135	-5.279	0.000
WCTotal	21.662	4.794	22.978	3.699	1.316	135	-3.540	0.001

Table 4. Results of the paired samples t-test for whale conservation attitudes.

From these paired samples t-tests we can deduce that the participant's overall happiness, their happiness in regard to the Pleasure dimension, the Meaning dimension and the Engagement dimension, their responsibility towards the conservation of the whale communities, their intention to encourage family and friends to help save the whales and their intention to donate money to projects that protect whales increased significantly after going on the whale watching excursion.

4.5 What influenced conservation attitudes?

In order to confirm whether or not the number of whales seen influenced conservation attitudes through the mediator of happiness, and to help answer research sub-question 1), a regression analysis with mediation was conducted. For this data, there were no participants that did not see whales. For that reason, the independent variable was not whether they saw whales or not, but instead was the number of whales they saw.

In this regression with mediation, the independent variable was the rating of the excursion (below average whales, average whales or above average whales); the mediators were the gains in each dimension of happiness; the dependent variable was the gains in whale conservation attitudes. The mediation pathway can be seen in Figure 7 below. As mentioned above, in order for there to be mediation, three conditions must be met.

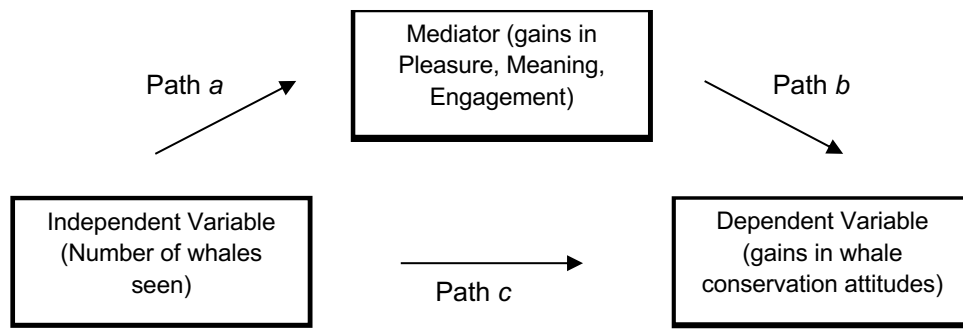


Figure 6. Mediation pathways according to Baron and Kenny (1986).

For ‘Path a’ (Condition 1), the number of whales seen did not show a significant relationship with any of the three dimensions of happiness. For the Pleasure dimension (PleasureGAIN) and research sub-question 2a), the regression showed ($F(1,135)=2.132$, $p<0.147$), with an $R^2=0.016$. This means that there was not enough evidence to state that the number of whales seen is related to the gains in the Pleasure dimension of happiness. For the Meaning dimension (MeaningGAIN) of happiness, the regression showed ($F(1,134)=0.153$, $p<0.696$), with an $R^2=0.001$. This means there was not enough evidence to state that the number of whales seen is related to the gains in the Meaning dimension of happiness. Finally, for the Engagement dimension (EngageGAIN) of happiness, the regression showed $F(1,133)=0.323$, $p<0.571$, with an $R^2=0.002$. This means there was not enough evidence to state that the number of whales seen is related to the gains in the Engagement dimension of happiness. Also, interesting to note is that there was not a significant relationship between the number of whales seen and the gain in overall happiness of the participants ($F(1,132)=1.326$, $p<0.252$) with an $R^2=0.010$.

While mediation cannot exist if Path a (Condition 1) is not met, regression analysis for “Path b” (Condition 2) was still conducted because it could potentially yield interesting results and help answer research sub-question 2). For ‘Path b’, all three dimensions of happiness showed significant relationships with the gains in whale conservation attitudes. For the Pleasure dimension (PleasureGAIN), the regression showed ($F(1,134)=31.724$, $p<0.000$) with an $R^2=0.191$. This means that there is enough evidence to state that gains in the Pleasure dimension of happiness are related to gains in whale conservation attitudes and that Pleasure accounts for 19.10% of the gains in whale conservation attitudes. For the Meaning dimension (MeaningGAIN) of happiness, the regression showed ($F(1,133)=20.700$, $p<0.000$) with an $R^2=0.135$. This means that there is enough evidence to state that gains in the Meaning dimension of happiness are related to gains in whale conservation attitudes and that Meaning accounts for 13.50% of the gains in whale conservation attitudes. Finally, for the Engagement dimension, the regression showed ($F(1,132)=15.650$, $p<0.000$) with an $R^2=0.106$. This means that

there is enough evidence to state that gains in the Engagement dimension of happiness are related to gains in whale conservation attitudes and that Engagement accounts for 10.60% of the gains in whale conservation attitudes.

For “Path *c*” (Condition 3) there was not a significant relationship between the number of whales seen and the gains in conservation attitudes. The regression showed $F(1,133)=3.113$, $p<0.080$, with an $R^2=0.023$. This means that there was not enough evidence to state that the number of whales seen is related to gains in whale conservation attitudes. As there was no previous significant relation between the independent variable and the dependent variable, a regression controlling for Paths *a* and *b* was not conducted.

From these regression analyses, it can be deduced that mediation did not occur between the independent variable, mediator, and dependent variable. Neither ‘Path *a*’ nor ‘Path *c*’ showed significant relationships and therefore mediation did not occur. However, ‘Path *b*’, namely the mediator is a predictor of the dependent variable, is met. This suggests that gains in the three dimensions of happiness are predictors of the gains in whale conservation attitudes. To further understand ‘Path *b*’, and to see to what degree gains in whale conservation attitudes are correlated to gains in Pleasure, Meaning and Engagement, a Pearson correlation analysis was conducted. Each dimension had a positive correlation, and gains in whale conservation attitude correlated most strongly with gains in Pleasure ($r=0.438$, $p<0.000$), followed by gains in Meaning ($r=0.367$, $p<0.00$) and finally gains in Engagement ($r=0.326$, $p<0.000$)

Taken together with an increase in happiness scores between the pretest and posttest questionnaire demonstrated by the paired samples t-test from above, it can be concluded that going on the excursion increased happiness and whale conservation attitudes and that the changes in happiness were significant predictors of the changes in conservation attitudes.

From here, a simple linear regression analysis was conducted on the gains in overall happiness and the gains in whale conservation attitudes. The gains in overall happiness showed a statistically significant regression ($F(1,131)=11.211$, $p<0.001$) with an $R^2=0.079$. This means that gains in overall happiness accounted for 7.90% of the gains in whale conservation attitude.

5.0 Discussion

The following section will discuss the findings of this research. It begins by looking into the extent to which experiencing whales influenced Pleasure, Meaning, and Engagement. This is followed by an exploration of why the three dimensions were increased after the excursion and how each dimension was influential on conservation attitudes. It will then reflect on the theoretical framework and discuss the limitations of the research. It will conclude with suggestions for further research and for conservation.

5.1 Seeing Whales on Pleasure, Meaning, and Engagement

The purpose of this research was to investigate the extent to which experiencing wildlife during wildlife excursions could influence the happiness, and subsequently the conservation attitudes of the participants. More specifically, the purpose was to answer the research question: *"to what extent does experiencing whales, through whale watching excursions, influence the conservation attitudes of the participants?"* The results of this research showed a slight, but significant change in the participants' conservation attitudes, as well as their reports of Pleasure, Meaning, and Engagement, after the excursion when compared to before. The main research question suggested that experiencing wildlife through the whale watching excursion led to these increases in Pleasure, Meaning, and Engagement and that those led to changes in conservation attitudes. That, however, was not the case as there was not a significant relationship between the number of whales seen and the changes in each dimension of happiness. The dimensions of happiness did not act as mediators between the number of whales seen and the changes in conservation attitudes. As such, research sub-question 1) *"to what extent does experiencing whales, through whale watching excursions increase happiness"* was answered as there was no significant relationship between the number of whales seen and the changes in Pleasure, Meaning, and Engagement. There was also no significant relationship between the number of whales seen and the changes in conservation attitudes found.

This result is surprising because according to the literature, experiencing whales was predicted to influence Pleasure, Meaning, and Engagement, which in turn would influence conservation attitudes through various means (Figure 2). This lack of a relationship could have been due to two main reasons. First, the number of whales seen is not as important as just interacting and reflecting on the natural experience. Passmore and Holder (2017) suggest that the extent to which one is involved with nature is not as important in predicting their change in well-being. Rather, any type of nature experience can increase well-being, as long as the participants reflect on the emotions elicited by the experience. In terms of this research, this could suggest that seeing more or fewer whales is not important in predicting the changes in well-being, as long as the participants reflected on the situation. Second, Curtin (2009) suggests that

this could be due to the fact that nature experiences and wildlife experiences are not separate entities. If you have wildlife, you have nature and therefore, the relationship between the number of whales seen and the changes in happiness did not show a significant relationship because it was overshadowed by the experience as a whole. This result is important because it shows that the influence of wildlife on overall well-being is not based on the amount of wildlife one sees, but instead on the experience itself.

5.2 Whale Watching and Happiness

While the number of whales the participants saw was not related to the changes in the three dimensions of happiness, each of the three dimensions still increased significantly after the excursion.

5.2.1 Whale Watching and Pleasure

The Pleasure dimension had the potential to increase significantly because wildlife experiences have been known to elicit strong emotions in participants, which can, in turn, influence their overall well-being in the present (Schueller & Seligman, 2010). This, however, was not the case, and it could have been due to the participants not feeling positive emotions as strongly as was expected. More specifically, they did not experience the feelings of wonderment and awe when they went on the excursion, nor did they feel like they were getting something out of the activity. This is evidenced by the small increases in the total Pleasure dimension, as well as each of the Pleasure items. It is possible that because the posttest questionnaire was not administered immediately after wildlife was witnessed, the effects of the experience could have diminished leading to lower reports according to the Pleasure dimension.

5.2.2 Whale Watching and Meaning

The Meaning dimension had the potential to increase after going on the whale watching excursion because being on the ocean and witnessing iconic creatures would have caused participants to have a peak experience and make them feel connected to nature. Evidence that this did happen is seen in this research by the increase in the total Meaning dimension of happiness, as well as each of the Meaning dimension items. It is possible, however, that the increase in the Meaning dimension could have been greater. Peak experiences are considered rare, they therefore likely did not account for the entire change (Maslow, 1964). Additionally, the tours used in the data collection of this research were quite large, holding up to 50 people ("Eagle Wing Tours," n.d.). Curtin and Kragh (2014) write that wildlife tourism, especially in smaller groups with a wildlife guide, can be critical to re-establishing our connection to nature. This is due to the unique combination of experience and interpretation (Curtin & Kragh, 2014). While the tours did have a wildlife guide, they were quite large (approximately 50 participants).

Had they used the smaller boats, which hold approximately 12 people, it is possible that increases in the Meaning dimension could have been greater.

5.2.3 Whale Watching and Engagement

The Engagement dimension had the potential to increase through the state of “flow” and the aftermath of peak experiences, which have been known to leave individuals feeling both extremely fortunate and gracious (Maslow, 1964). It was thought that the changes in the Engagement dimension could potentially be hindered due to the lack of competencies of some whale watching participants (Curtin, 2009). However, this was not the case as was seen by the greatest increase in the Engagement dimension of the three dimensions from before the excursion to after. Specifically, increases in the *Engage1* item “Over the last hours I felt time was passing quickly” (Figure 5.) provides evidence that “flow” was experienced. This is because the distortion of time is a characteristic trait of the state of “flow” (Curtin, 2009).

5.2.4 Whale Watching and Overall Happiness

The results of this research show that the participants’ overall happiness increased significantly after going on the whale watching excursion. This makes sense because according to Seligman (2004), Pleasure, Meaning, and Engagement together lead to the greatest level of happiness. As each of the dimensions had an increase after the whale watching excursion, the overall happiness of the participants should also increase after the excursion. This was indeed the case, with overall happiness increasing the most when compared to each of the three dimensions.

5.3 Pleasure, Meaning, and Engagement Influence Conservation Attitudes

In order to answer the second research sub-question, “*to what extent does an increased well-being influence conservation attitudes,*” the extent to which the changes in each dimension of happiness were predictors of the changes in conservation attitudes was explored. To understand this, a change in the conservation attitudes had to occur from before going on the excursion to after. The results of this research showed that the participants’ conservation attitudes had a small, but significant increase after going on the excursion. Additionally, this research found that each dimension of happiness was influential on the participants’ conservation attitudes. The Pleasure dimension had the greatest influence on conservation attitudes, followed by the Meaning, and then the Engagement.

5.3.1 Pleasure and Conservation Attitudes

The results of this research found that the Pleasure dimension had the greatest influence on conservation attitudes of the three dimensions. The Pleasure dimension

was expected to influence conservation attitudes through the evocation of positive emotions (Jacobs et al., 2012). The fact that the Pleasure dimension had the greatest influence on conservation attitudes could be because the influence of positive emotions was stronger than expected. It has been found that emotions are important in both our experiences and reactions to wildlife and they "...take control over mind and behavior once they occur." (Jacobs et al., 2012, p. 5). Furthermore, it is our emotions that govern our motivations and inherently influence our attraction to wildlife and the decisions we make in regard to them (Jacobs et al., 2012). In terms of this research, because participants experienced positive emotional states on the excursion, it makes sense that the participants' reported higher on the conservation attitudes.

5.3.2 Meaning and Conservation Attitudes

The results of this research found that the Meaning dimension had the second greatest influence on conservation attitudes, but it was actually slightly higher than the Engagement dimension. The Meaning dimension likely influenced conservation attitudes through the re-establishment of the participants' connection to nature, through the discovery of self-identity and through contemplation and reflection (Curtin, 2009; Hartig et al., 2007; Prati et al., 2017)

5.3.3 Engagement and Conservation Attitudes

This research found that the Engagement dimension had the smallest influence on conservation attitudes when compared to Meaning and Pleasure. The Engagement dimension was predicted to influence conservation attitudes through the restorative properties of nature and their ability to motivate the participants to act environmentally (Curtin, 2009). It is possible that the environment the whale watching took place in did not provide the restoration that was expected. According to Gatersleben and Andrews (2013), if an environment has a low prospect (low visibility) and high refuge (many hiding places), then it can actually cause a negative reaction in the participants (Gatersleben & Andrews, 2013). In this research, this could have been the case as the ocean could be deemed as something with a poor field of vision and many hiding places. Additionally, whale watching was expected to influence the participants to reciprocate their feelings of increased happiness from the Engagement dimension back onto the thing that made them feel that way, i.e. the whales (Goei & Boster, 2005). This likely did not occur, as was evidenced by the fact that the Engagement dimension was influenced most by whale watching, yet it had the smallest influence on conservation attitudes. It is possible that because the participants paid to see the whales on the excursion, perhaps they felt they already had an equal exchange of services and thus were less willing to reciprocate their feeling of happiness back to helping the whales (Goei & Boster, 2005).

It is interesting to note that while Pleasure, Meaning, and Engagement all had strong influences on conservation attitudes, they did not account for all of the observed changes in conservation attitudes. It is possible that a large part of the changes in conservation attitudes could have been due to the company itself. The whale watching company, Eagle Wing Tours, is very conservation oriented. As stated previously, they have naturalists onboard who discuss the conservation of whales and wildlife with the participants ("Eagle Wing Tours," n.d.). Discussions with guides can act as a means through which participants' reflect on the experiences, which can contribute to a transformative experience and influence environmental action (Ballantyne, Packer, & Sutherland, 2011).

5.3.4 Overall Happiness and Conservation Attitudes

Changes in overall happiness was also a significant predictor of the changes in whale conservation attitudes. This was expected because Pleasure, Meaning, and Engagement together lead to the greatest level of happiness (Schueller & Seligman, 2010). As each of these dimensions was a predictor of the changes in conservation attitudes, it is unsurprising that overall happiness was also a predictor. What was unexpected was how little changes overall happiness influenced conservation attitudes.

5.4 Reflection

The theory of positive psychology is the study of what makes us happy (Seligman & Csikszentmihalyi, 2000). The theoretical framework of this research used the theory of positive psychology to predict the extent to which experiencing wildlife, through whale watching excursions could influence the conservation attitudes of the participants. It suggested that experiencing wildlife would increase the overall happiness of the participants, which in turn would influence their conservation attitudes. The theory of positive psychology suggests that overall happiness is the product of three dimensions, namely Pleasure, Meaning, and Engagement (Seligman, 2002). Accordingly, in this research, it was predicted that experiencing whales during whale watching excursions would increase happiness according to each of these dimensions. In terms of the three dimensions, experiencing wildlife was predicted to influence the Pleasure dimension through the evocation of positive emotions (Curtin, 2009); it was predicted to influence the Meaning dimension through re-establishing a connection to nature (van den Born et al., 2018); and it was predicted to influence the Engagement dimension through the discovery of gratitude (Hartig et al., 2007).

This, however, was not the case. While Pleasure, Meaning, and Engagement did all increase after going on the excursion, it was found that this increase was not due to the number of whales seen, and as such Pleasure, Meaning, and Engagement did not act as mediators. This is interesting because the theoretical framework suggested that experiencing wildlife, especially cetaceans, should make the participants happier. More

specifically, the experience should be emotionally fulfilling and cause the participants to have peak experiences (Amante-Helweg, 1996; DeMares, 2000). Viewing cetaceans was thought to influence the happiness of the participants, perhaps more so than other wildlife, because of their iconic status and the special relationship that they share with humans (Cloke & Perkins, 2005; Valentine & Birtles, 2004). Therefore, the fact that a significant relationship did not exist, causes this part of the theoretical framework to remain unconfirmed, which consequently has implications for its applicability. In terms of the theory of positive psychology, it brings into question the extent to which experiencing wildlife itself can influence happiness according to each dimension. While Pleasure, Meaning, and Engagement were increased after going on the excursion, it was not due to experiencing wildlife. This result is important because it shows that the influence of wildlife on overall well-being is not based on the amount of wildlife one sees, but instead on the experience itself. This can also have consequences for nature conservation. As stated before, interactions between humans and wildlife can elicit emotions in people, and these emotions can foster a connection back to the object that created them (Curtin & Kragh, 2014; Jacobs et al., 2012). This emotional connection can dictate their willingness to protect nature (Hughes, 2013). Additionally, emotional satisfaction from experiencing wildlife was predicted to enhance environmental awareness (Amante-Helweg, 1996). Therefore, because a significant relationship did not exist, the extent to which nature conservation can be encouraged through just experiencing wildlife remains unknown. Finally, because experiencing wildlife did not share a significant relationship with happiness, the extent to which this research can contribute specifically to the growing body of literature about human-wildlife interactions is somewhat limited and any knowledge gaps that it was meant to close were also not confirmed.

Nevertheless, the theory of positive psychology was still useful in understanding the role that happiness has on conservation attitudes, as well as the influence the overall excursion had on the participants' happiness.

In terms of happiness and conservation attitudes, Pleasure, Meaning, and Engagement were each influential on the conservation attitudes of the participants to some degree. This is important for two main reasons. First, it provides a means with which wildlife excursions as a whole can be connected to conservation attitudes. If participants can indeed become happier by participating in wildlife excursions, such as whale watching, then this can, in turn, be used to foster attitudes and intentions towards conservation. Second, positive psychology helps give a clearer understanding of the extent to which the participants' conservation attitudes were influenced by their happiness and why. In terms of Pleasure, happiness can relate to conservation attitudes through the evocation of positive (Jacobs et al., 2012); in terms of Meaning, happiness can relate to conservation attitudes through the re-establishment of the participants' connection to nature, through the discovery of self-identity and through contemplation and reflection

(Curtin, 2009; Prati et al., 2017; van den Born et al., 2018) and in terms of Engagement, happiness can relate to conservation attitudes through restoration (Hartig et al., 2007). Together, these can have implications for nature conservation as a whole. If more individuals are participating in excursions such as these, then they are more likely to have their conservation attitudes influenced in a positive way and subsequently are more likely going to want to protect nature.

In terms of the overall excursion influencing happiness, the theory of positive psychology was useful in understanding the extent and reasons why the participants might have been happier after the excursion when compared to before. While this was not due to the experiencing wildlife itself, the theory of positive psychology still provided some context to how the experience as a whole could have influenced these changes. This is important because it gives insight into an activity which can have benefits for overall happiness and conservation attitudes.

Overall, the ability of the theory of positive psychology to predict the extent to which experiencing wildlife, through whale watching excursions, can influence conservation attitudes was somewhat limited. Positive psychology was helpful in understanding why the participants' happiness was increased, as well as the role that happiness plays in the conservation attitudes of the participants. It, however, had limited ability to explain the role that experiencing the wildlife itself had on happiness.

From this, the main suggestion to improve the theoretical framework would be to expand it. That is, not looking into how experiencing wildlife specifically during these excursions influences the happiness of the participants, but rather looking into the experience as a whole. Wildlife tourism experiences encompass more than just viewing wildlife. They are made up of various different aspects, of which experiencing wildlife is only one. They include being out in nature, they include education, they include discussions. Thus, expanding the theoretical framework of this research to look at the experiences as a whole could potentially yield more concrete results into what increases the happiness of the participants, and subsequently their conservation attitudes. This, in turn, could then provide critical information about protecting and conserving nature as a whole.

5.5 Limitations

The findings of this research have various limitations.

5.5.1 Study Site

The first limitation of this research was the restricted whale watching season in Victoria. As whale watching only runs until the end of October, there was only enough time to do three weeks of data collection. Additionally, October is no longer high tourist season,

therefore there were fewer participants available to collect data from. This was problematic because it did not allow as much data to be collected and thus the sample was not as representative as it could be.

Next, conducting research in October in Victoria was a limitation as mid-October marks the beginning of the rainy season. The poor weather associated with the rainy season led to many whale watching excursions being canceled and less data being collected. Furthermore, poor weather could have influenced the whale watching experience as a whole

5.5.2 Methods

Due to the fact that this research was done in the field, the findings may have limited internal validity. Field research, in general, is known for having high generalizability, as it takes place in real-world settings (Aziz, 2017). However, what it has in external validity, it lacks in internal validity, as it is difficult to control for extraneous variables. In this research specifically, it is not possible to say for certain whether or not it was the whale watching excursion that caused the observed changes in well-being and conservation attitudes because there are other extraneous variables, such as the knowledge of the staff or the weather, that were not controlled for.

Next, in terms of the sample, there was not a group of participants who did not see whales, therefore, a true quasi-experimental design was not possible. Had there been an excursion that did not see whales, a true comparison could have been made to determine whether or not it was seeing whales that led to the observed changes. Furthermore, the nature of the research led the sample to be individuals who were on vacation, which could have caused a bias in the results.

In terms of the data collection tool, the questionnaire used was only provided to participants in English. Due to the time restrictions of the whale watching season, translation and cross translation into other languages was not possible. As many of the participants did not originate from English speaking countries, difficulties understanding the language used on the questionnaire may have occurred. This could have led to the participants misreporting on the questionnaire.

In terms of the data collection procedure, the inability to provide the participants with the questionnaire immediately after they saw wildlife, may have led to less accurate reports on the posttest questionnaire. Waiting until they returned from the excursion, not only caused the participants to be rushed and burdened by the posttest questionnaire, it also allowed time for the magic of the experience to fade. As such, their reports might have been different than if the posttest questionnaire had been administered immediately.

Finally, the ratings of each excursion were not given by a single consistent staff member. Rather, there was two or three different staff that would provide the rating of the excursion. This could have affected the results as different staff might have rated the same excursion differently

5.5.3 Theoretical

In terms of the theoretical framework, overall the theory of positive psychology worked well for this research. However, one limitation is that the original results of the factor analysis, before items were removed, showed that there were four different dimensions. This suggests that the three dimensions outlined by the theory may not be as distinct as originally found. Therefore, basing the results on three distinct dimensions may have caused oversight in the research design and limited the ability of the theory to explain certain phenomena.

5.6 Recommendations

5.6.1 For Further Research

There are various recommendations we have for further research.

First, looking into whether or not conservation seeing more or less wildlife can influence conservation attitudes through another mediator that is not happiness.

Second, extending the length of the data collection to ensure that there was at least one group of people who did not see whales. This would allow further understanding of whether or not it was actually seeing the whales that led to the changes or if it was something else. Additionally, looking into and trying to control other factors that could have influenced the observed changes would be beneficial

Third, is to conduct longitudinal studies of the participants after they go on the whale watching excursion. That is, to check back with the same participants over a long time period to see if any observed changes in their happiness and conservation attitudes from the whale watching excursion remain after time has passed. This would provide useful information about the longevity of the influences of wildlife experiences that might be difficult to uncover in other ways. The researcher could determine how long the participants were influenced by the whale watching excursion.

Fourth, conducting research with more than one whale watching company would be beneficial. Eagle Wing Tours was very conservation oriented, and as such the participants may have been more influenced compared to if had they gone with a different company. Looking into the differences between companies who market different types of excursions could provide useful insights.

Finally, conducting research on wildlife experiences outside of just whales would be interesting. Humans share different relationships with different species of wildlife and thus looking into the influence that these other species might have could be interesting.

5.6.2 For Conservation

Based on the results of this research, the recommendations we have for conservation are threefold.

First, government funding towards programs that facilitate experiences in nature should be increased. Examples of these could be outdoor education or wilderness therapy. Natural experiences such as these have the potential to increase mental, physical and social well-being. Therefore, by increasing funding towards programs such as these, individuals would have more opportunities to engage in activities that are good for their overall happiness and can, in turn, promote conservation attitudes and intentions.

Second, the promotion of nature-based activities that lead people to experience positive emotions, that help them find purpose, and that leave them feeling gracious should be increased. Each dimension of happiness was influential on individuals' conservation attitudes and therefore, promoting activities that increase their happiness according to these three dimensions could potentially encourage them to think and act more environmentally.

Finally, wildlife tourism companies should be expanding their itineraries to include other aspects such as discussions and education about conservation into their tours. As just experiencing wildlife is not enough to increase the happiness of their participants, adding aspects such as these will not only help ensure that the participants are happier after the experience, but could also consequently encourage them to conserve nature.

6.0 Conclusion

The results of this research are threefold. First, both the participants' well-being according to the three dimensions of happiness outlined by Seligman, as well as their conservation attitudes increased after going on the whale watching excursion when compared to before. As a result, we have discovered an activity that acts as a medium to not only increase the overall well-being of participants, but that also influences their conservation attitudes. Furthermore, we have highlighted the importance that nature and wildlife experiences have in our lives and have gained a deeper understanding of the relationship between nature and humans. Second, each of the three dimensions of happiness showed a significant relationship with the increase in conservation attitudes. The Pleasure dimension had the greatest influence on conservation attitudes and intentions followed by the Meaning dimension and then the Engagement. As a result, we have discovered the important role happiness plays in shaping conservation attitudes, as well as discovered some of the ongoing internal processes that can be used to promote nature conservation. Third, contrary to the theoretical framework, there was not a relationship between the number of whales seen by the participants and the changes in their happiness according to the three dimensions. As a result, the changes in happiness did not act as mediators between the number of whales seen and the changes in conservation attitudes. Therefore, the relationship between the number of whales seen during whale watching excursions, and conservation attitudes was not confirmed. What was confirmed was that going on whale watching excursions themselves leads to increases in happiness and increases in happiness are influential on the participants' conservation attitudes.

Literature Cited

- Amante-Helweg, V. (1996). Ecotourists' beliefs and knowledge about dolphins and the development of cetacean ecotourism. *Aquatic Mammals*, 22(2), 131–140.
- Amel, E., Manning, C., Scott, B., & Koger, S. (2017). Beyond the roots of human inaction: Fostering collective effort toward ecosystem conservation. *Science*, 356(April), 275–279. <https://doi.org/10.1017/S0376892900018178>
- Aziz, H. A. (2017). Comparison between Field Research and Controlled Laboratory Research. *Arch Clin Biomed Res*, 1(2), 101–104. Retrieved from <http://www.archclinbiomedres.com/articles/comparison-between-field-research-and-controlled-laboratory-research.pdf>
- Ballantyne, R., Packer, J., & Hughes, K. (2009). Tourists' support for conservation messages and sustainable management practices in wildlife tourism experiences Roy Ballantyne, Jan Packer and Karen Hughes University of Queensland, School of Tourism, Brisbane QLD 4072, Australia. *Tourism Management*, 30, 658–664.
- Ballantyne, R., Packer, J., & Sutherland, L. A. (2011). Visitors' memories of wildlife tourism: Implications for the design of powerful interpretive experiences. *Tourism Management*, 32(4), 770–779. <https://doi.org/10.1016/j.tourman.2010.06.012>
- Baron, R. M., & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations, (6), 1173–1182.
- Baumeister, R. F., Vohs, K. D., Aaker, J. L., & Garbinsky, E. N. (2013). Some key differences between a happy life and a meaningful life. *Journal of Positive Psychology*, 8(6), 505–516. <https://doi.org/10.1080/17439760.2013.830764>
- Byrka, K., Hartig, T., & Kaiser, F. G. (2010). Environmental Attitude as a Mediator of the Relationship between Psychological Restoration in Nature and Self-Reported Ecological Behavior. *Psychological Reports*, 107(3), 847–859. <https://doi.org/10.2466/07.PR0.107.6.847-859>
- Chan, K. M. A., Balvanera, P., Benessaiah, K., Chapman, M., Díaz, S., Gómez-Baggethun, E., ... Turner, N. (2016). Opinion: Why protect nature? Rethinking values and the environment. *Proceedings of the National Academy of Sciences*, 113(6), 1462–1465. <https://doi.org/10.1073/pnas.1525002113>
- Cloke, P., & Perkins, H. C. (2005). Cetacean performance and tourism in Kaikoura, New Zealand. *Environment and Planning D: Society and Space*, 23(6), 903–924. <https://doi.org/10.1068/d57j>
- Curtin, S. (2009). Wildlife tourism: The intangible, psychological benefits of human-wildlife encounters. *Current Issues in Tourism*, 12(5–6), 451–474. <https://doi.org/10.1080/13683500903042857>
- Curtin, S., & Kragh, G. (2014). Wildlife Tourism: Reconnecting People with Nature. *Human Dimensions of Wildlife*, 19(6), 545–554. <https://doi.org/10.1080/10871209.2014.921957>

- Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia, and well-being: An introduction. *Journal of Happiness Studies*, 9(1), 1–11.
<https://doi.org/10.1007/s10902-006-9018-1>
- DeMares, R. (2000). Human peak experience triggered by encounters with cetaceans. *Anthrozoos*, 13(2), 89–103. <https://doi.org/10.2752/089279300786999914>
- Eagle Wing Tours. (n.d.). Retrieved January 24, 2019, from
<https://www.eaglewingtours.com>
- Emmons, R. A., & McCullough, M. E. (2003). Counting Blessings Versus Burdens: An Experimental Investigation of Gratitude and Subjective Well-Being in Daily Life. *Journal of Personality and Social Psychology*, 84(2), 377–389.
<https://doi.org/10.1037/0022-3514.84.2.377>
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology. The broaden-and-build theory of positive emotions. *The American Psychologist*, 56(3), 218–226. <https://doi.org/10.1037/0003-066X.56.3.218>
- Fredrickson, B. L., & Joiner, T. (2002). Positive Emotions Trigger Upward Spirals Toward Emotional Well-Being, 172–175.
- Gatersleben, B., & Andrews, M. (2013). Health & Place When walking in nature is not restorative — The role of prospect and refuge. *Health & Place*, 20, 91–101.
<https://doi.org/10.1016/j.healthplace.2013.01.001>
- Goei, R., & Boster, F. J. (2005). The roles of obligation and gratitude in explaining the effect of favors on compliance. *Communication Monographs*, 72(3), 284–300.
<https://doi.org/10.1080/03637750500206524>
- Hartig, T., Kaiser, F. G., & Strumse, E. (2007). Psychological restoration in nature as a source of motivation for ecological behaviour. *Environmental Conservation*, 34(4), 291–299. <https://doi.org/10.1017/S0376892907004250>
- Hartig, T., Mitchell, R., de Vries, S., & Frumkin, H. (2014). Nature and Health. *Ssm*, 0.
<https://doi.org/10.1146/annurev-publhealth-032013-182443>
- Hughes, K. (2013). Measuring the impact of viewing wildlife: Do positive intentions equate to long-term changes in conservation behaviour? *Journal of Sustainable Tourism*, 21(1), 42–59. <https://doi.org/10.1080/09669582.2012.681788>
- Jacobs, M. H., & Harms, M. (2014). Influence of interpretation on conservation intentions of whale tourists. *Tourism Management*, 42, 123–131.
- Jacobs, M. H., Vaske, J. J., & Roemer, J. M. (2012). Toward a Mental Systems Approach to Human Relationships with Wildlife: The Role of Emotional Dispositions. *Human Dimensions of Wildlife*, 17(1), 4–15.
<https://doi.org/10.1080/10871209.2012.645123>
- Kals, E., Schumacher, D., & Montada, L. (1999). Emotional affinity toward nature as a motivational basis to protect nature. *Environment and Behavior*, 31(2), 178–202.
<https://doi.org/10.1177/00139169921972056>
- Kirk, R. E. (2007). *Experimental Design*. The Blackwell Encyclopedia of Sociology.

- Lawrence, T. B., Phillips, N., & Hardy, C. (1999). Watching Whale-Watching: Exploring the Discursive Foundations of Collaborative Relationships. *The Journal of Applied Behavioural Science*, 35(4), 479–502.
- Lee Duckworth, A., Steen, T. A., & Seligman, M. E. P. (2005). Positive Psychology in Clinical Practice. *Annual Review of Clinical Psychology*, 1(1), 629–651. <https://doi.org/10.1146/annurev.clinpsy.1.102803.144154>
- Marseille, M. M., Elands, B. H. M., & van den Brink, M. L. (2012). Experiencing Polar Bears in the Zoo: Feelings and Cognitions in Relation to a Visitor's Conservation Attitude. *Human Dimensions of Wildlife*, 17(1), 29–43. <https://doi.org/10.1080/10871209.2012.631208>
- Maslow, A. H. (1962). *Toward a psychology of being. An insight book ; no. 5* (1st ed.). Princeton, New Jersey: D. Van Nostrand Company.
- Maslow, A. H. (1964). *Religions, values, and peak-experiences* (Vol. 35). Columbus: Ohio State University Press.
- Mayer, F. S., & Frantz, C. M. P. (2004). The connectedness to nature scale: A measure of individuals' feeling in community with nature. *Journal of Environmental Psychology*, 24(4), 503–515. <https://doi.org/10.1016/j.jenvp.2004.10.001>
- McDonald, J. . (2014). *Handbook of Biological Statistics* (3rd ed.). Baltimore, Maryland: Sparky House Publishing.
- Nisbet, E. K., Zelenski, J. M., & Murphy, S. A. (2008). With Nature to Environmental Concern and Behavior. *Environment And Behavior*, 27(1), 1–26. <https://doi.org/10.1177/0013916506295574>
- Orams, M. B. (1997). The Effectiveness of Environmental Education: Can We Turn Tourists into "Greenies"? *Progr. Tourism Hospit. Res*, 3, 295–306. [https://doi.org/10.1002/\(SICI\)1099-1603\(199712\)3:4<295::AID-PTH85>3.3.CO;2-4](https://doi.org/10.1002/(SICI)1099-1603(199712)3:4<295::AID-PTH85>3.3.CO;2-4)
- Passmore, H., & Holder, M. D. (2017). Noticing nature : Individual and social benefits of a two-week intervention. *The Journal of Positive Psychology*, 9760, 1–10. <https://doi.org/10.1080/17439760.2016.1221126>
- Pearson, R. G. (2016). Reasons to Conserve Nature. *Trends in Ecology and Evolution*, 31(5), 366–371. <https://doi.org/10.1016/j.tree.2016.02.005>
- Peterson, C., Park, N., & Seligman, M. E. P. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies*, 6(1), 25–41. <https://doi.org/10.1007/s10902-004-1278-z>
- Powell, R. B., & Ham, S. H. (2008). Can ecotourism interpretation really lead to pro-conservation knowledge, attitudes and behaviour? Evidence from the Galapagos Islands. <https://doi.org/10.2167/jost797.0>
- Prati, G., Albanesi, C., & Pietrantonio, L. (2017). Social Well-Being and Pro-Environmental Behavior: A Cross-Lagged Panel Design. *Human Ecology Review*, 23(1), 123–139. <https://doi.org/10.22459/HER.23.01.2017.07>
- Privette, G. (1983). Peak Experience , Peak Performance , and Flow : A Comparative Analysis of Positive Human Experiences, 45(6), 1361–1368

- Schueller, S. M., & Seligman, M. E. P. (2010). Pursuit of pleasure, engagement, and meaning: Relationships to subjective and objective measures of well-being. *Journal of Positive Psychology*, 5(4), 253–263. <https://doi.org/10.1080/17439761003794130>
- Schultz, P. W. (2000). New Environmental Theories: Empathizing With Nature: The Effects of Perspective Taking on Concern for Environmental Issues. *Journal of Social Issues*, 56(3), 391–406. <https://doi.org/10.1111/0022-4537.00174>
- Seligman, M. E. P. (2002). *Authentic Happiness*. Free Press.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*. <https://doi.org/10.1037/0003-066X.55.1.5>
- Seligman, M. E. P., Parks, A. C., & Steen, T. (2004). A balanced psychology and a full life. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 359(1449), 1379–1381. <https://doi.org/10.1098/rstb.2004.1513>
- Shanahan, D. F., Bush, R., Gaston, K. J., Lin, B. B., Dean, J., Barber, E., & Fuller, R. A. (2016). Health Benefits from Nature Experiences Depend on Dose. *Scientific Reports*, 6(June), 1–10. <https://doi.org/10.1038/srep28551>
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach ' s alpha, 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- Valentine, P., & Birtles, A. (2004). Wildlife Watching. In *Wildlife Tourism-Impacts, Management and Planning* (pp. 15–34). Altona, VIC, Australia: Common Ground Publishing.
- van den Born, R. J. G., Arts, B., Admiraal, J., Beringer, A., Knights, P., Molinario, E., ... De Groot, W. T. (2018). The missing pillar: Eudemonic values in the justification of nature conservation. *Journal of Environmental Planning and Management*, 61(5–6), 841–856. <https://doi.org/10.1080/09640568.2017.1342612>
- Yong, A. G., & Pearce, S. (2013). A Beginner ' s Guide to Factor Analysis : Focusing on Exploratory Factor Analysis, 9(2), 79–94.
- Zhao, X., Lynch Jr., J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny : Myths and Truths about Mediation Analysis, 37(August). <https://doi.org/10.1086/651257>

Appendix 1: List of Whale Watching Companies Contacted

Company Name	Contact Information	Tour Dates	Contacted (Y/N)	Response (Y/N)	Found Via	Notes
Eagle Wing Whale & Wildlife Tours	Phone: 1-800-708-9488 Online	Year Round	Y	Y	Internet	No whale guarantee after Nov. 1
Orca Spirit Adventures	Phone: 1-877-815-7255 Email: whales@orcaspirit.com	Year Round	Y	N	Internet	Winter tours after Nov with whale guarantee
SeaKing Adventures	Email: seaking@islandnet.com 1seaking@gmail.com	April-Oct 31	Y	Y	Internet	Did not want to help
Five Star Whale Watching	Email: orcas@5starwhales.com	April-Oct 31	Y	N	Internet	N/A
Prince of Whales Whale Watching	Phone: 1-250-383-4884 Email: sales@princeofwhales.com	Year Round	Y	Y	Internet	Never responded after initial contact
Springtide Whale Watching and Ecotours	Phone: 1-800-470-3474 Email: Info@SpringTideCharter.com	Year Round	Y	N	Referral	Whale watching only until Oct 31
BC Whale Tours Victoria	Phone: 1-250-590-5030 Email: info@bcwhaletours.com	March-Oct 31	Y	N	Internet	N/A
Sidney Whale Watching	Phone: 1-250-656-7599 Email: info@sidneywhalewatching.com	March-Nov	Y	N	Internet	Located in Sidney

Appendix 2: Pretest and Posttest Questionnaires

Pretest Questionnaire

Hello there!

This questionnaire is part of the research I am conducting for my master's thesis on whale watching excursions, whale conservation and the well-being of people. I will also be administering a second, one-page questionnaire once the excursion has returned. Thank you in advance for your cooperation!

First Name:

Age:

A. 18-24

B. 25-34

C. 35-44

D. 45-54

E. 55-64

F. 65+

Gender:

A. Male

B. Female

C. Other

Country of Origin:

A. Canada

B. United States

C. Other

Here are some general questions about whales:

Have you ever seen whales in their natural environment?

A. Yes

B. No

If yes, what kind of whales did you see? *Please circle all that apply:*

A. Killer whales

B. Grey whales

C. Humpback whales

D. Beluga whales

E. Other

Here are some questions about how you feel about whale conservation.

Please circle the number that applies to you most:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. I feel personally concerned for the survival of the whales.	1	2	3	4	5	6	7
2. I feel responsible for the conservation of whale communities.	1	2	3	4	5	6	7
3. I intend to encourage family and/or friends to help save the whales.	1	2	3	4	5	6	7
4. I intend to donate money to a project that protects whales.	1	2	3	4	5	6	7

The following questions are about what you find important in life, and your feelings about life in general.

All of the questions reflect statements that many people would find desirable, but we want you to answer only in terms of whether the statement describes how you actually live your life.

Please circle the number that applies to you most:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. I want to make the world a better place.	1	2	3	4	5	6	7
2. Over the last hours, I felt time was passing quickly.	1	2	3	4	5	6	7
3. In choosing what to do, I always take into account whether it will benefit the environment.	1	2	3	4	5	6	7
4. I love to do things that excite my senses.	1	2	3	4	5	6	7
5. I am rarely distracted by what is going on around me.	1	2	3	4	5	6	7
6. Life is too short to postpone the pleasures it can provide.	1	2	3	4	5	6	7
7. I enjoy activities and situations that challenge my skills and abilities.	1	2	3	4	5	6	7
8. "Life is short – eat dessert first."	1	2	3	4	5	6	7
9. What I do matters to society.	1	2	3	4	5	6	7
10. My life serves a higher purpose.	1	2	3	4	5	6	7
11. I am always very absorbed in what I do.	1	2	3	4	5	6	7
12. In choosing what to do, I always take into account whether it will be pleasurable.	1	2	3	4	5	6	7

Please rate the following question on a scale of 0-10 (0 being "not at all", 10 being "completely"):

Overall, how happy did you feel over the last hours?

0 1 2 3 4 5 6 7 8 9 10

Posttest Questionnaire

First Name:

If you are interested in the results of this research, please write your email here:

Here are some questions about how you feel about whale conservation.

Please circle the number that applies to you most:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. I feel personally concerned for the survival of the whales.	1	2	3	4	5	6	7
2. I feel responsible for the conservation of whale communities.	1	2	3	4	5	6	7
3. I intend to encourage family and/or friends to help save the whales.	1	2	3	4	5	6	7
4. I intend to donate money to a project that protects whales.	1	2	3	4	5	6	7

The following questions are about what you find important in life, and your feelings about life in general.

All of the questions reflect statements that many people would find desirable, but we want you to answer only in terms of whether the statement describes how you actually live your life.

Please circle the number that applies to you most:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1. Over the last hours, I felt time was passing quickly.	1	2	3	4	5	6	7
2. In choosing what to do, I always take into account whether it will benefit the environment.	1	2	3	4	5	6	7
3. I love to do things that excite my senses.	1	2	3	4	5	6	7
4. Life is too short to postpone the pleasures it can provide.	1	2	3	4	5	6	7
5. I enjoy activities and situations that challenge my skills and abilities.	1	2	3	4	5	6	7
6. My life serves a higher purpose.	1	2	3	4	5	6	7

Please rate the following questions on a scale of 0-10 (with 0 being "not at all", and 10 being "completely").

Overall, how satisfied are you with the excursion today?

0 1 2 3 4 5 6 7 8 9 10

Overall, how happy did you feel over the last hours?

0 1 2 3 4 5 6 7 8 9 10

For any further questions, please email adean.alessandrini@wur.nl

Appendix 3: Daily Recordings of Whale Watching Excursions

Date	Time	Weather	Rating (0-3)	Surveys Completed
October 13/18	10:00 am	Sunny	1	11
October 14/18	9:30 am	Sunny	2	8
October 14/18	2:30 pm	Sunny	1	6
October 15/18	10:00 am	Sunny	3	16
October 16/18	10:00 am	Sunny	3	13
October 17/18	10:00 am	Sunny	2	12
October 19/18	10:00 am	Sunny	2	12
October 21/18	10:00 am	Sunny	2	14
October 23/18	2:30 pm	Cloudy	2	9
October 25/18	10:00 am	Cloudy	3	12
October 26/18	10:00 am	Sunny	1	12
October 30/18	10:00 am	Sunny	2	13