



Downloaded from: <http://bucks.collections.crest.ac.uk/>

This document is protected by copyright. It is published with permission and all rights are reserved.

Usage of any items from Buckinghamshire New University's institutional repository must follow the usage guidelines.

Any item and its associated metadata held in the institutional repository is subject to

**Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)**

**Please note that you must also do the following;**

- the authors, title and full bibliographic details of the item are cited clearly when any part of the work is referred to verbally or in the written form
- a hyperlink/URL to the original Insight record of that item is included in any citations of the work
- the content is not changed in any way
- all files required for usage of the item are kept together with the main item file.

**You may not**

- sell any part of an item
- refer to any part of an item without citation
- amend any item or contextualise it in a way that will impugn the creator's reputation
- remove or alter the copyright statement on an item.

If you need further guidance contact the Research Enterprise and Development Unit  
[ResearchUnit@bucks.ac.uk](mailto:ResearchUnit@bucks.ac.uk)



**5<sup>th</sup> Annual  
Applied Positive Psychology  
Symposium**

Saturday 1st June 2019,  
High Wycombe

**Proceedings of  
Presented Papers**

Edited by

Genevieve M. Cseh

# 6

## The Wave Model: A Holistic Exploration of the Sea's Positive Effect on Wellbeing

Jenna Sinclair

University of East London (MAPPCCP)

Contact: [jennasnclr@gmail.com](mailto:jennasnclr@gmail.com)

### Abstract

*A multidisciplinary research initiative, Blue Health, has recently formed, highlighting essential connections between water, health and wellbeing and shifting focus from the therapeutic effects of Blue Space to investigating outcomes after closer contact: immersion in nature. Within Positive Psychology, interventions are increasing as a means of applying research into the positive effects of nature-integrated immersion; however, there remains an absence of empirical evidence for the potential positive effects of sea-immersion on wellbeing, which could form ground for a future water-based intervention. For this purpose, eight self-reporting recreational sea users, participated in 60-minute semi-structured interviews with the aim of answering the research question, How does sea-immersion in hostile weather conditions positively affect wellbeing? to gain a constructivist understanding of the subjective experience of the phenomena within a qualitative research design, grounded theory. Consequently, The Wave Model (TWM) emerged, consisting of four main themes: Awareness, Connectedness, Time and Growth, with a notion of Duality running throughout: awareness of both positive and negative emotions, connectedness and disconnection. Within growth, a sense of self as an ongoing process related to the concept of ongoing time with a simultaneous necessity for mindfulness and an awareness of the present moment to allow the possible self to emerge. This study adds to existing research and implies a framework for a wellbeing model to be drawn on within applied positive psychology and coaching psychology with ground for future testing.*

### Introduction

*Know yourself as the seeing not the seer and you will find yourself everywhere.*

– Rupert Spira (n.d.)

As Summer sun weakens and Autumn becomes Winter, beaches grow quieter, with the exception of the remaining few continuing to embrace the waves, leading to question what they know about wellbeing following sea-immersion in hostile conditions, and could it be modelled, theoretically, to advance the discipline of Positive Psychology (PP)?

Emerging integrative research is raising awareness of the powerful benefits of the sea (and water) on the human psyche. Health, psychology and neuroscience studies are finding our brains, after periods of exposure to water, become significantly calmer, clearer and happier, turning into a 'blue mind'

(Nichols, 2015) in contrast to the ‘red mind’ many people inhabit from daily life stress and stimulation. The Biophilia hypothesis (Wilson, 1984) states we have an instinctive bond with nature in our genes; we seek experiences with other forms of life, including the sea. We need it and the sea needs us (Kelly, 2018). Yet, time spent in nature is declining and we are more disconnected from nature than ever (Kellert, Case, Escher, Witter, Mikels-Carrasco & Seng, 2017).

Until now, PP has been offering the beginnings of a solid literature base for nature as a positive precursor to happiness, although criticised by some (Capaldi, Passmore, Nisbet, Zelenski & Dopko, 2015) as being an under-researched area, calling for more empirical evidence. With this in mind, it is time to highlight and remedy the lack of research within PP exploring the positive effects of the sea, as a specific area of nature investigation.

Within Applied Positive Psychology (APP), Positive Psychological Interventions (PPIs) are empirically-based “treatment methods or intentional activities that aim to cultivate positive findings, behaviours or cognitions” (Sin & Lyubomirsky, 2009, p. 468) administered for various periods of time. Given the current absence of a water or sea-based PPI, the primary aim of this research is to create the theoretical framework for a future sea-based PPI to be used in APP including integrative coaching practices. If a theoretical model could be applied to an intervention, it is suggested that the world’s largest, free resource – the sea – could be further utilised to improve the mental health of thousands.

Sea-based interventions are, however, currently recognised in conjunction with surfing. Doctors in Devon and Cornwall can now prescribe surf therapy for children to improve mental wellbeing, in collaboration with *The Wave Project*, inspired by research examining the positive impact of structured surfing courses on the wellbeing of young people (Godfrey, Devine-Wright & Taylor, 2015). The charity *Surf Action* successfully helps to reduce PTSD symptoms among war veterans by teaching them to surf. Without undermining the benefits of surfing interventions, a simpler, cheaper and more accessible PPI should be developed, to harness the wellbeing properties of the sea without the need for equipment or prescription.

Last year, a study followed the two-week intervention of open (cold) water swimming to treat anxiety and depression in a 24-year old woman who had been taking prescription drugs for seven years. With positive results, she remains medication-free one year later (Tulleken, Massey, Tipton & Harper 2018). The study was the first of its kind, paving the way for similar research to follow.

A sea-immersion PPI could even be accessible to non-swimmers (taking the relevant safety precautions) or nervous swimmers. One of the participants interviewed in this study was new to swimming and another simply ‘dipped’. There is a broad scope of activities available to those who are willing to immerse, yet just sea immersion itself offers enough to positively enhance wellbeing.

For the purpose of this research, sea immersion is defined as a full body immersion into the sea or ocean in any part of the world, with or without a wetsuit, with or without reference to partaking in recreational activities or sport. The focus of this research was exploring what drives people towards sea immersion for wellbeing purposes in hostile winter conditions (defined as low temperatures, high winds and other adverse weather conditions, including snow) and what are the reported experienced wellbeing effects following sea-immersion. The following literature review serves to expose any gaps in research to provide further rationale for this study.

## Literature Review

### The Sea

Research into the wellbeing effects of the sea have emphasised place and proximity, i.e. living by the sea (Wheeler, White, Stahl-Timmins & Depledge, 2012) and the benefits of Blue Space (Bell, Graham, Jarvis & White, 2017; Foley & Kistemann, 2015). One study found the *sound* of the sea to help stress recovery (Alvarsson, Weins & Nilsson, 2010). But what more does physically being *in* it offer?

Open cold water immersion (CWI) has been reviewed as both a hazard and a treatment (Tipton, Massey, Corbett & Harper, 2017) but research on it is still limited. The benefits of cold-water immersion have become a popular health fad and may serve to drive extrinsic motivations to immerse for health benefits. Such an application has been suggested as a potential treatment for depression, although alternatives like taking a cold shower (Shevchuck, 2008) neglect the possible additional factors offered by the sea which contribute to wellbeing, such as the nature element or unknown therapeutic elements of the sea itself. ‘Blue Exercise’ has been coined for any exercise undertaken in and around any natural aquatic environment and has been reported to result in health benefits (White, Bell, Elliot, Jenkin, Wheeler & Depledge, 2016) but this does not solely isolate sea immersion as a subject of investigation.

## **Nature**

Research shows that nature immersion can benefit wellbeing by making us more caring, authentic and feel more connected as well as feeling more compassionate to ourselves (Weinstein, Przybylski & Ryan, 2009) although Weinstein et al.'s study only involved exposing participants to slides depicting images of nature or sitting among plants in an office space. More recently with PP, the benefits of connecting with nature and its application as wellbeing interventions (Passmore & Holder, 2016) have found restorative effects on “suboptimal levels of hedonic and eudaimonic wellbeing” (Capaldi et al., 2015) and positive affect, including increased connectedness. Recently, there have been prompts for researchers interested in facilitating nature connectedness and its associated benefits to “focus specifically on activities that involve contact, meaning, emotional attachment, or a compassionate relationship with nature that includes engaging with nature’s beauty” (Lumber, Richardson & Sheffield, 2017).

Exposure to nature promotes feelings of wellbeing in a variety of different ways. Paul Wong’s concept of chaironic happiness defines a type of happiness aroused through connection to something bigger than ourselves (2010b) by encouraging mindfulness (Howell, Dopko, Passmore, & Buro, 2011) and by evoking the positive emotion of awe (Rudd, Vohs, & Aker, 2011). Awe-inducing stimuli caused participants to report more spiritual or supernatural beliefs about deeper existential questions (Valdesolo & Graham, 2013). The “oceanic feeling” was a term used by Romain Rolland in a letter to Sigmund Freud to convey a feeling of being one with the universe. But why is that oneness not referred to as “the mountainous feeling”? What is the sea providing that nature research is missing, if anything? Why are people often drawn to immerse first thing in the morning when sea temperatures are close to freezing?

## **Motivation**

Much research exists on motivations behind partaking in dangerous sea-based recreational activities within the domains of Leisure (Beard & Ragheb, 1983), Sport Psychology (Fortier, Vallerand, Briere, & Provencher, 1995), and Tourism (Holden & Sparrowhawk, 2002). On surfing, research into motivations and values (Farmer, 1992) explored what intrinsic rewards surfers prioritise against the hazards surfing poses. How surfing has affected mood has been explored by Pittsinger, Kress, and Crussemeyer (2017) in a study examining the effect of a 30-minute surfing session through a thematic analysis, exploring the “captivating nature of surfing” to understand surfers’ subjective

experiences (O’Fuchs, 2007). They found *lifestyle, health, competition* and *sharing* to be major themes. Quantitative research on anglers and rafters revealed *status, solitude* and *relaxation* as motives (Thapa, Confer & Mendelsohn, 2004). However, all recreational studies include the exercise induced affect of the various sports.

Self Determination Theory (Deci & Ryan, 2000) outlines two modes of motivation: intrinsic and extrinsic. Intrinsic motivation is the desire to act in the absence of operationally separable rewards or external (extrinsic) motivators. Self-determined, internally-motivated behaviours lead to more positive experiences by honouring the human need for autonomy (Vallerand & Losier, 1999). It is proposed that exploring motivation among participants for sea-immersion in the absence of extrinsic influencing factors in summertime, such as social interaction (Triguero-Mas et al, 2015; Beard & Ragheb, 1983 as cited in O’Connell, 2010), or for the sport alone, will offer deeper insight into intrinsic rewards experienced as a result of regular sea-immersion.

### **Research Question**

Calls for research in this area to employ qualitative methodology (O’Connell 2010) as well as to examine non-surfing populations (Pittsinger et al., 2017) provide scope for research into a wider variety of populations who regularly choose immersive sea-based recreation activities. Shifting political, cultural and societal structures also illuminate the limitations of focusing on quantitative measures of PP and PPIs to understand complex human phenomena such as wellbeing (Parks & Biswas-Diener, 2013 as cited in Wong, 2017). Drawing on the review offered above, the current study’s aim was to conduct a qualitative exploration of mixed aged international men and women, who self-reported regularly immersing in the sea during hostile conditions, to explore motivations and outcomes for wellbeing, in order to create a theory based on the research question: *how does sea-immersion in hostile weather conditions positively affect wellbeing?*

### **Method**

*Language serves as a representational system for our experiences*

– Bandler & Grinder, 1975, p. 24

As a social constructivist philosophy underpins this research, the most fitting methodology was Grounded Theory (GT) which allows data to emerge based on limited assumptions, exploring the phenomenon of the sea via the constructed, subjective, *social experience* of the sea. In contrast to a

scientific realist framework (Madill, Jordan, & Shirley, 2000), constructionism recognises that the interaction between participants and researcher may influence one another during the collection of data (Anderson, 1986) and participant recruitment, data collection, and analysis are intertwined from the start, proceeding and interacting simultaneously (Wainwright, 1994).

## Participants

Eight self-reporting regular recreational sea users responded to research advertisements on social media and a university noticeboard. The sample was intentionally mixed sex and from different countries, who participated in a range of immersive sea activities (see Table 1). The type of activity was irrelevant to the sampling process as the research aimed to include all mediums of sea-immersion to isolate the experience of the sea above activity-related experience.

Table 1.

### *Participant Demographics*

<b>Gender</b>	<b>Country</b>	<b>Type of sea-immersion</b>
M	Italy	Surfing
M	Canada	Scuba Diving
F	Denmark	Ice swimming ‘dipping’
F	USA	Swimming
M	UK	Swimming
F	UK	Swimming
F	UK	Swimming
M	UK	Kite Surfing/ Swimming

No indication or distribution of reward was given at any stage of the recruitment or research process. Theoretical sampling emerged as the research progressed; the researcher decided to pursue interviewees who participated in sea-swimming without wetsuits, constituting a more immersive experience. The researcher recruited participants until theoretical saturation occurred (Charmaz, 2014).



## Materials

Data were collected by a 45-60 minute Skype interview (Seitz, 2016), which provided adequate time for a deep interview (Schostack, 2012, as cited in Alshenqeeti, 2014) and opened an interactional space allowing ideas and issues to arise (Charmaz, 2014, p. 58).

Initially, questions were as open as possible (Newton, 2010) with each interview beginning “*Tell me about your experience with the sea*” to begin research with a general question (Bowers, 1988) and on provision that the shorter the question, the longer the answer (Barbour & Schostack, (2005, p. 43, as cited in Alshenqeeti, 2014). Questions were mostly semi-structured to elicit the greatest emotional response and to allow depth to be achieved (Andreas, 1999; Rubin & Rubin, 2005, p. 88, as cited in Alshenqeeti, 2014). Questions were not asked in regard to the nature of the activity or sport.

The researcher’s coaching background enabled a professional conversation by employing a range of relevant skills: self-awareness, being fully focused on the client (Garfinkle, 2005 as cited in Pennington, 2009), employing empathetic listening skills, and encouraging the participant to talk (Charmaz, 2014). Questions were asked strategically to expand on nominalisations to help explore ongoing processes present for the interviewee (Bandler & Grinder, 1975) using a ‘clean language’ interviewing technique (Sullivan & Rees, 2008), e.g., “*What kind of power is that power?*” (Interview 7). Both the researcher’s and interviewees’ assumptions were challenged (Charmaz, 2014, p. 115) by asking for more definition, e.g. “*What would you say the opposite to grounding is?*” (Interview 8) based on the clean language question, ‘*What is it not?*’ for further expansion.

The researcher learnt that unstructured interviews, undertaken in a coaching manner, garnered richer data as the interviewer was more able to listen attentively rather than being preoccupied with question structure. This was a positive decision as negative emotions and negative self-concept disrupt interactive flow (Miczo, 2003, p. 480, as cited in Charmaz, 2014).

## Procedure

After responding to the research advert, participants emailed the researcher to formally register interest. Henceforth, participants were sent the participant invitation letter by email and consent form and a mutually suitable interview time was scheduled. Participants were informed in the consent form of the confidentiality of their data and their right to withdraw. The participants were observed for non-verbal consent cues continuously (Horrocks, 2010). Participants were thanked in advance for

their time and willingness to participate and at the end of the interview a verbal debriefing was given before a debriefing email reiterating risks associated with sea-immersion and recommended safety information provided by RNLI for adhesion to ethical recommendations. Participants were notified when the audio recorder was operating. All interviews were conducted via Skype, except one by telephone recorded with an App called Call Recorder. Interviews were stored as mp3 files on a password protected device. The researcher transcribed three interviews manually, using Google Voice, voice recognition software, and submitted the remaining five to an instant transcription software service website, Temi.com, due to time restrictions. Temi offers full data protection and privacy, stating “[transcripts] are securely stored and transmitted using TLS 1.2 encryption, the highest level of security available. Files are transcribed by machines and are never seen by a human” (Temi, 2019). The transcripts were reviewed by the researcher for automatic transcription errors as Temi claims to provide ~90% accuracy.

### Data Analysis

Open coding (line by line) was firstly applied to transcriptions using Charmaz’s constant comparative method (2014) in between data collection (Glaser & Strauss, 1967). The short codes, formed of gerunds as a heuristic device, to iterate sense of process and action (Charmaz, 2014, pp. 116-121), were categorised on a visual display to form axial codes while continuously being compared against new data for dissimilarities and likeness (Corbin & Strauss, 1990). Focused coding was employed to transition original codes to more inductive, higher codes (Glaser, 1978).

This resulted in the emergence of several categories: Time, Mindfulness, Freedom, Stopping, Positive Emotions, Discomfort, Self-efficacy, Awe/Unknown, Self-as process/ Growth and Sharing/Being

with/Connectedness. The use of comparative analysis condensed these into the final themes: Awareness, Time, Growth, Connectedness & Duality as depicted in Figure 1 and the following prose:

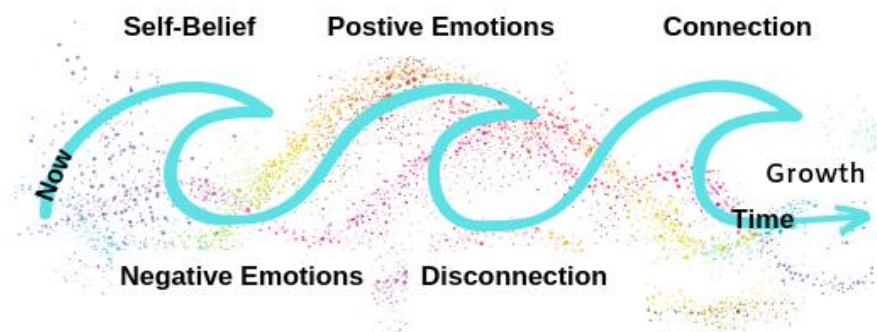


Figure 1. The Wave Model (TWM)

## **Prose**

*I am nothing.*

*Standing on the shoreline I see myself reflected: I see power.*

*I connect: feet rooted in earth, body embraced by water, mind filled with spirit and vital life force burning strong.*

*What pains me nourishes me.*

*I am here now so my future self remembers.*

*I am everything.*

## **Results**

The analysis resulted in four closely interrelated key categories emerging from the data: *Awareness*, *Connection*, *Time*, and *Growth*, overarched by a prominent theme of *Duality*.

### **Awareness**

The subcategories within the theme of awareness include positive emotions, negative emotions and sensing. We must have awareness to experience any feelings; it is fundamental.

#### ***Positive emotions***

An abundance of positive emotions were recorded, including: joy, calm, completeness, pride, curiosity, wonder, awe, speechlessness, warmth & cosiness, surprise (pleasant), luckiness, gratitude, bravery, realisation, excitement, feeling alive, admired, grounded, liberated.

Participants also sensed positive, bigger feelings such as “life is beautiful” the “need to coexist and protect”, a similarity between nature and us, a hidden or secret world, a sense of space and expansiveness and a feeling of weightlessness. A sense of freedom was observed predominantly within this subcategory among other sensations in the form of feelings. Often, participants could not find the words to describe the feeling that sea-immersion gave them and many metaphors were offered:

*You're like a pot of sauce or something, you've just been stirred up really fast...it feels like it's as close as you can get to ... in the womb or something ... you know, that feeling of the waves it feels like ... it's like the heartbeat of the world or something. (G)*

*It's like a kind of warm, cosy feeling throughout your body. (C)*

### **Negative emotions**

However, there was a prevalence of discomfort and negative feelings in order to arrive at the positive feelings:

*Excruciatingly painful. (H)*

*It was almost like it's assaulting every sense you've got...and that's when I did put my face in and that's when I was like, oh, this is what people are talking about, clearly. And it was pain. Um, but like a burning pain, it felt like burning. Not that I've ever burnt my face, but it's a horrible, burning sensation. (H)*

*...Cold in your bones which turns into pain as well but yeah that's what you're looking for...there's wind that makes you scream from the cold, it's something you know you're gonna face - it's part of the game. (U)*

A sense of anticipation was recorded multiple times, often described as a mix of fear and excitement (duality) and included in the category of negative emotions was the subcategory of anxiety. Anxiety, as well as depression, was a much-noted precursor for sea-immersion, with participants reporting relief from anxiety in the hours after immersing. Many participants reporting that they just “feel better”. The positive feelings had a time limit of a few hours before anxiety resurfaced, requiring repeated immersion.

### **Connection**

Through positive and negative emotions, participants connect to a sense of self, to the environment and to others: interacting with and connection with nature and animals related to the sea; laughing and playing with other sea swimmers; connecting through inspiration and following advice and guidance from others to initiate their sea-immersion; then sharing experiences across many mediums in the hope to inspire and initiate others in an ongoing chain, each connecting to the next. Connecting also leads to positive feelings. Within connection lay two subthemes – spirituality and disconnection:

*The sea is like an old friend. (U)*

*The way they were watching us .... Maybe there was a bit of admiration. (U)*

*When I arrive, I say 'hello sea!'...'thank you, sea, love you!' (G)*

*So whenever I share ... Facebook pictures ... people comment or they'll see us the next day that 'you guys are crazy' or someone else: 'can you tell me? I'd really love to do that'. So even talking about it kind of gets you excited. So I think while it may just last that day, the idea of re-experiencing it through conversation is powerful. (R)*

### ***Spirituality***

Participants spoke of an emergent sense of spirituality, becoming spiritual as a *result* of sea swimming, as well as considering 'the bigger picture', sensing 'something bigger' and more often than any other code, was the need to, or enjoyment of, being or feeling 'part of' something. Participants felt supported through discomfort by feeling 'part of' something bigger and by also feeling part of the social group that initiated them or inspired them (connecting). A sense of identity and a sense of self was shaped through being part of something. Spirituality provided meaning, with participants offering existential comments concerning feelings of insignificance, being inconsequential, and awe-related feelings of wonder and marvel:

*It just feels right. (G)*

*You feel like you're at one with everything around you. (R)*

*It's like being embraced by something that is really powerful. (U)*

*I'm not a religious person, but I can imagine that when you're confirmed and you have that full immersion. (J)*

*You're just at one with everything, there is nothing else at that moment when you were in that cold water...all of the elements seem to...come together. (J)*

### ***Disconnection***

While participants felt a need to connect with nature and feel 'part of' something, be it a group or the bigger picture via nature, they simultaneously wished to disconnect from technology, material things such as swimwear or wetsuits, and to mentally leave baggage at the shoreline. A sense of weightlessness and lightness was prominent as well as 'feeling liberated', 'free from obligations' and a general sense of freedom. The need to be alone and alone with nature fell under a sense of connecting with self as well as disconnecting socially:

*You get to go at the times where there's no bugger else on the beach, it's the best! (G)*

*I don't want to listen to music when I swim. I don't want it, you know, I don't want to be distracted by notifications...Knowing you can't be got. (J)*

*The swimsuit, sometimes feels like a bit of a barrier... it feels just so real and how we're meant to be...there's no stuff. There's no issues. There's no baggage. (J)*

## **Time**

The theme of time interlaced much of the data. Participants told how they came to sea-immersion as a story, chronologically, starting with childhood, remembering. Then in the future, anticipating the next time, before settling into establishing a routine, like clockwork. Under the broad theme of time lays the category of mindfulness, which is closely linked to awareness and stopping.

*I used to find as a teenager, I would get on my bike with my Walkman and would go and cycle for miles along the beach. I used to love, I'd just sit and watch the waves. (H)*

## **Mindfulness**

Participants reported the waves evoking mindfulness, spoke of the multisensory experience and of noticing nature multiple times. Breathing consciously, a meditative experience, and being present also arose.

## **Stopping**

The notion of stopping within the category of time is also related to disconnection. Participants spoke of “clawing back time”, valuing precious moments, capturing time by taking photographs, realising the importance of ‘time-out’ as well as sensing their morning sea-immersion as separation from the rest of their day, using language such as “before the day begins”, highlighting the notion of ‘the day’ as a metaphorical part of their life from which they wish to disconnect. Transcripts were rich with time-constructed concepts such as “making a day of it” and “making time for it”. Relocation, with the intent of more frequent sea-immersion or a desire for closer proximity, was largely reported, giving way to convenience – *saving* time. Within the category of stopping is the notion of slowing down, resting in the sea, standing still and having an awareness of age and mortality preliminary to the ultimate stoppage, death.

*So it's nice you know, sort of looking through [the diary] and going: 'When can I find time to go in?' (G)*

## **Growth**

With time as the medium, growth was the end result of the process. By enduring negative emotions, enjoying positive emotions, and developing a new sense of self, over time, what emerged was a

happier, more resilient person with stronger self-belief and energy for whatever life brought to them. Under the theme of growth lay the categories of challenge and subcategory of self-as-process.

*When I'm in the sea, everything feels all right. Everything feels good. Everything feels like it's achievable. (H)*

*If you can do that then you can do other stuff so it builds a sense of confidence that you can push through discomfort and achieve things. (C)*

### **Challenge**

Self-reassurance, cultivating strength, facing discomfort, self-motivating and overcoming fears and negative self-talk all served as challenges participants had to face with regards to sea-immersion. Dealing with the elements, preparing with rituals before and afterwards, making time in a busy schedule, and setting challenges to 'stay in longer' against previous times and against others. Being dared, rebelling, and obtaining validation from self and others fell under this category. Some competed in challenges, races and other forms of competition as part of their immersion but, regardless of activity, all participants reported having to push themselves or push their boundaries in order to immerse due to the conditions.

### **Self-As-Process**

What emerged was the concept of the self as one of change, positively growing with each immersion – adapting, accepting, renewing, cleaning, self-assuring, identifying (having an awareness of self) self-regulating, learning about self, integrating sea immersion as part of a broader self-care regime.

### **Duality**

As discussed, dualities were observed throughout the themes, in numerous ways; e.g., where participants spoke of empowerment, they also spoke of feeling powerless to the force of the sea. They felt liberated while feeling grounded:

*Because you can be standing completely still can't you?... on solid ground ... but not be in any way grounded at all because your brain's just scattered, whereas you can literally be floating in the sea and feel more grounded than anything. (G)*

The negative sensations provide even more energy; the more difficult it is, the better you feel:

*I mean everything was cold...I couldn't coordinate my mouth to speak, everything had just got so cold. But actually when I got out, I actually looked at a video...where I've got uncontrollable afterdrop so I am shaking so much I can't even hold my camera still, but actually the energy*

*that gave me afterwards... it's like an adrenaline shot... I would say these cold water swims and especially that one, that was 4.2°, was like having several shots of caffeine.* (H)

As well as feelings being dichotomous, “I have that kind of excitement. Stroke, fear almost.” (G)

TWM shows these themes like waves ebbing and flowing with troughs and crests before rejoining the matter from which they arose, in an endless cycle, bound together by time, resulting in growth (Figure 1).

## Discussion

### Interpretation of Results

Overall, it was found that sea-immersion positively affects wellbeing by enforcing enhanced awareness to a number of positive and negative emotions, increases a sense of connectedness to nature, others and spirituality, as well as offering disconnection from anxious thoughts, technology and others. Through the multisensory nature of the sea, mindfulness occurred naturally. Participants were able to stop anxious thoughts about the past or the future and become present to their feelings and surroundings. By overcoming the challenge of immersing in cold water, the end result was an enhanced sense of self leading to an overall positive outcome of growth.

TWM adds new information to the discipline of PP among existing models of wellbeing by a unique display of dualities within the themes – a simultaneous need for disconnection *and* connection, negative *and* positive emotion, stopping *and* a sense of continuity – unlike any known model of wellbeing. Moreover, there are currently no models for wellbeing that invite nature as a key modality. These findings add to the existing evidence on wellbeing, illuminating similarities between models of wellbeing such as PERMA (Seligman, 2011) and the Hero’s Journey model of development (Campbell, 1990).

### Nature’s Effect on Wellbeing

These discoveries support the substantial amount of research on nature’s positive effect on wellbeing, including the studies that initiated the rationale for this research: nature immersion increases connectedness as well as positive affect (Capaldi, et al. (2015). TWM is a representative example of participants who have increased their sense of connectedness as part of an overall increase in wellbeing through exposure to nature. Furthermore, Kaplan’s findings (1995) that nature



reduces mental fatigue is reflected in these findings, with participants reporting increased energy following immersion. TWM reiterates results that positive emotions are evoked even on brief contact with nature (Mayer, McPherson Frantz, Bruehlman-Senecal, & Dolliver, 2009; Nisbet & Zelenski, 2011) as six out of eight participants in this sample were immersing in the sea for less than ten minutes at a time. However, this research only partially corroborates Ulrich's study (1984) which found nature to have restorative effects, including increasing positive emotional states and sustained attention, with participants in this sample reporting positive emotional states but neglecting to comment on sustained attention.

### **Self-Concept**

Emotional states are closely connected with a sense of self. Huitt (2009) explains, "self-esteem is the affective or emotional aspect of self" and TWM observes the self as process as an integral concept for wellbeing. Kahneman's (2011) multiple-self theory offers insight into the dual concepts of self: the experienced self and the remembered self. The experienced self lives in the moment, employing awareness, cognition and making choices. The remembering self is the hindsight that *analyses* our experience. We spend 100% of the time in the experiencing self, as we experience memories, but the two selves are radically different in their interpretation of events. Essentially, "the experiencing self does not have a voice" (p. 381) and it is the remembering self that makes decisions with regard to creating future memories through experiences, the most memorable. Kahneman presents this dilemma as a conflict of interests, a paradox, between the two selves. The experiencing self answers the question, 'Is that painful?' while the remembering self answers, "How was it on the whole?" Memories form the timeline and narrative of our lives and are the only true collectables we have: to remember gives life narrative and meaning. Often participants would stay in the water for less than five minutes due to the intolerable pain it caused. So why go back the next day? In addition to this, Kahneman's findings on the peak-end rule is relevant: if an experience ends well, we will discard all negative experience and vice versa; if that end point is one of a feeling of achievement – as many participants reported feeling on successfully immersing – that memory serves as a positive experience. Therefore, the very *memory* of immersing acts as a wellbeing resource by reminding participants of their self-efficacy, ability and resilience, and provides a sense of growth and self-belief which improves self-esteem.

Regarding motivation, as hypothesised primarily, Franken (1994, p. 443) states the self-concept is the basis for all behaviour. Without a self-concept, we have no possible self, and the idea of a

possible self creates motivation for behaviour. Bandura (1997) provides ground that self-efficacy is the best predictor for accomplishment of the task. This calls for future testing of TWM to determine the individuals' self-efficacy levels in order to fortify the model based on the observation that if all participants have a higher than average self-efficacy level, sea-immersion may not have a positive effect on those with lower self-efficacy levels who lack the required level of courage to immerse. One way of testing this would be using quantitative methods, issuing the General Self-Efficacy Scale (Ched, Gully & Eden, 2001), a self-report scale, to test participants. Similar learnt self-regulation through physical discomfort occurs in the teachings of yoga (Gard, Noggle, Park, Vago & Wilson, 2014).

### **Awareness**

The operative modality of the discomfort felt in yoga is mindful awareness. Awareness offers us the *choice* to sit with discomfort and observe with openness and acceptance rather than avoiding it. The unique difference between the sea and yoga is that the sea forms part of our natural environment as well as being something *outside of our control*, therefore *initiating* us into a state of mindfulness by its natural temperament. Ecopsychology encourages fostering more states of intense consciousness of environment (Kahn & Hasbach, 2012). Arne Naess (1995) conceives the notion of the 'ecological self', a seminal concept which is a sense of our identity that acknowledges our interdependence on the rest of nature. However, this concept has been criticised as simply echoing a sense of belonging to a place (Valera, 2018).

We must apply metacognition to gain a sense of self as awareness of thoughts; this allows for enlightenment to our authentic selves and our ego self (Ivtzan, 2015). To attain growth, we must use mindfulness to connect with our sense of a best possible self, one that is separate from our current self, and to reconnect with the experiencing self in order to later benefit the remembering self: reiterating the paradoxical sense of separation while being a part of something bigger, mirroring the participant-sea relationship.

### **Connectedness**

To feel 'part of' something illustrates a need for relatedness, inclusion and belonging. The findings demonstrate a correlation between wanting to feel part of something and the act of caring. Being at one with the universe is categorised alongside sensing awe, and the emotion of awe increases prosocial behaviour (Piff, Dietze, Feinberg Stancato, & Keltner, 2015) The study also supports

Weinstein, Przybylski, and Ryan's (2009) evidence that nature makes us more caring, presenting a paradox: as previously considered, nature needs us to care about it now more than ever (Kellert et al., 2017; Kelly 2018).

More broadly contextualising these findings, Wilber's holon theory (1997b) philosophises that a holon is a whole that is simultaneously part of another whole, i.e. a person is a complete entity, yet a *part of* the universe (another whole). The LIFE Model (Lomas, Hefferon, & Ivtzan, 2014), inspired by Wilber's theory, is used within APP to derive wellbeing initiatives from observing the four ontological dimensions of the person. Within the interobjective quadrant lays the ecological system: again, our relationship with the environment is crucial to wellbeing.

The underside of connectedness was disconnection. The researcher speculates that the desired sense of disconnection stems from the notion of fragmentation pervading society, referring to the absence or underdevelopment of connection among society and societal groups resulting in poor interrelationships (Hooks, 1995). Disconnection currently operates within the mind as a form of separation, constant disruptions to our daily life and work, from technology with notifications from mobile phone apps, shorten and further fragment our attention span, affecting our ability to be present. Sea-immersion offers disconnection from these stresses and anxieties.

### **Time**

By 'clawing back' time, participants possibly experience "pure time" (Bergson, 2007) in contrast to "measurable time" which participants consider makes up the "rest of their day". According to Bergson, the flow of real time can only be experienced by intuition (2007, pp. 162-163). Interestingly, intuition is a deep awareness unclouded by reasoning, outlining the parallel between intuition and mindfulness. Thus, a sense of 'pure time' may be experienced by mindfulness.

### **Nonduality**

The duality of experiencing both positive and negative emotions in order to flourish has illuminated dialectics research within PP (Ivtzan, Lyle, & Medlock, 2018; Lomas & Ivtzan, 2015), where dialectic refers to the tension between two opposing forces; the binary opposites are interdependent. These findings signpost a striving for balance and further understanding of the holistic human experience to live fully and meaningfully, as well as paving the way for future interventions which acknowledge the dialectic nature of wellbeing, additionally answering calls for more meaningful

interventions, which this research has revealed are also lacking within PP, as well as serving to answer criticisms of PP being too focused on the positive (Wong & Roy, 2017).

Nonduality has been articulated by Blackstone (2006, p. 31) “as nondual consciousness, we do not sense ourselves as separate from our experience”. Thus, ultimately, wellbeing is dependent on our interconnectedness and absolute disconnection from everything is impossible.

### **Limitations**

Emergent grounded theory is both fluid and temporal; the inability to replicate this study exactly due to recognised ongoing changes with both research participants and the researcher is not a concern within this epistemology.

Some technical issues ensued; i.e. sound quality issues, due to the method of data collection, led to uncertain transcription and the audio recorder having inadequate storage space to record the entire interview for Participant 4, resulting in a shorter interview transcript for analysis.

Furthermore, analysis can only take place within the context of the researcher’s existing knowledge. Moreover, time resources led to a small sample size. With additional time, a more refined theory could have been produced. It is acknowledged that eight interviews fall short of the recommended ten to ensure saturation (Bodan & Biklen, 2006). Further delimitations of the study include socio-economic status of participants. Although care was taken *not* to include a WEIRD (Western, Educated, Industrialised, Rich, Democratic) sample (Pollet & Saxon, 2018), participants were all middle-class, white and educated. Wellbeing is constructed differently across different cultures (Lomas 2015; 2017) and so testing this theory on a larger sample than the cross-cultural representation that this study surveyed could be beneficial.

A suggestion for future research entails interviewing participants during or immediately after sea-immersion for a more accurate portrayal of the discomfort felt, due to a proposed closer recall of the associated experience of sea immersion.

### **Practical and Theoretical Implications**

In this phenomenon, negative emotions served to propel participants into an improved version of themselves. Within a coaching framework, sea immersion could be integrated. A PP Blue Health coach would initially guide clients through immersion, instructing until they become self-regulatory;

coaching has been found to have a significant positive effect on self-efficacy (Moen & Allgood, 2009). Inherent in the practise would be mindfulness. Mindfulness has been applied to help with coping and for the self-regulation of pain (Kabat-Zinn, 1985; 2013). Therefore, to employ mindfulness as both a coping mechanism to overcome difficulty and to savour such immersion in a natural environment creates a dually beneficial outcome for wellbeing, in the short and long term, encouraging healthy individuals to flourish and serving to remedy anxiety and depression.

## Conclusion

This study has founded a new, holistic model of wellbeing which encompasses the sea as a primary and necessary modality. It highlights the interdependence between humanity and nature, adding to previous research findings of a positive correlation between nature immersion and wellbeing and offers a novel perspective for an intervention that answers calls within PP for more meaningful work, for not only humanity, but what the world needs now. By raising the profile of nature as a precursor for wellbeing, we augment the necessity of nature's wellbeing and as such, the benefits serve all.

## References

- Alshenqeeti, H. (2014). Interviewing as data collection method: a critical review. *English Linguistics Research*, 3(1), 39-45. <http://dx.doi.org/10.5430/elr.v3n1p39>
- Alvarsson, J., Weins, S., & Nilsson, M. (2010). Stress recovery during exposure to nature sound and environmental noise. *International Journal of Environmental Research and Public Health*, 7(3): 1036–1046.
- Anderson, P. (1986). On method in consumer research: a critical relativist perspective. *Journal of Consumer Research*. 13, 155-73.
- Bandler, R., & Grinder, J. (1975). *The structure of magic. A book about language and therapy*. Palo Alto, CA: Science and Behaviour Books.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman.
- Beard, J., & Ragheb, M. (1983). Measuring leisure motivation. *Journal of Leisure Research*, 15(3), 219-228. doi:10.1080/00222216.1983.11969557
- de Bell, S., Graham, H., Jarvis, S., & White, P. (2017). The importance of nature in mediating social and psychological benefits associated with visits to freshwater blue space. *Landscape and Urban Planning*, 167, 118-127. doi: 10.1016/j.landurbplan.2017.06.003
- Bergson, H. (2007). *The creative mind: An introduction to metaphysics*. New York, NY: Dover.

- Blackstone, J. (2006). Intersubjectivity and nonduality in the psychotherapeutic relationship. *Journal of Transpersonal Psychology*, 38(1), 25-40.
- Bogdan, R., & Biklen, S. (2006). *Qualitative research in education: An introduction to theory and methods*. Allyn & Bacon.
- Campbell, J. (1990). *The hero's journey*. San Francisco, CA: Harper & Row.
- Capaldi, C., Passmore, H., Nisbet, E., Zelenski, J., & Dopko, R. (2015). Flourishing in nature: A review of the benefits of connecting with nature and its application as a wellbeing intervention. *International Journal of Wellbeing*, 5(4), 1-16. doi:10.5502/ijw.v5i4.449
- Charmaz, K. (2014). *Constructing grounded theory: A practical guide through qualitative analysis* (2nd rev. and exp. ed.). London, United Kingdom: Sage.
- Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods*, 4(1), 62-83. <https://doi.org/10.1177/109442810141004>
- Corbin, J., & Strauss, A. (2008) *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed). London, United Kingdom: Sage.
- Crussemeyer, J., Kress, J., & Pittsinger, R. (2017). The effect of a single bout of surfing on exercise-induced affect. *International Journal of Exercise Science*, 10, 7, 989-999.
- Farmer, R. J. (1992). Surfing: Motivations, values, and culture. *Journal of Sport Behavior*, 15(3), 241- 257.
- Foley, R., & Kistemann, T. (2015). Blue space geographies: Enabling health in place. *Health & Place*, 35, 157-165. doi:10.1016/j.healthplace.2015.07.003
- Fortier, M., Vallerand, R., Briere, N., & Provencher, P. (1995). Competitive and recreational sport structures and gender: A test of their relationship with sport motivation. *International Journal of Sport Psychology*. 26, 24–24.
- Franken, R. (1994). *Human motivation* (3rd ed.). Brooks.
- O’Fuchs, H., & Schumer, H. ( 2007). Beyond sport: A thematic analysis of surfing. *South African Journal for Research in Sport, Physical Education and Recreation*, 29(2), 11-26.
- Gard, T., Noggle, J., Park, C., Vago, D., & Wilson, A. (2014). Potential self-regulatory mechanisms of yoga for psychological health. *Frontiers Humanistic Neuroscience*, 8, 770.
- Godfrey, C., Devine-Wright, H., & Taylor, J. (2015). The positive impact of structured surfing courses on the wellbeing of vulnerable young people. *Community Practitioner*, 88(1), 26–29.
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory*. Chicago, IL: Aldine.
- Glaser, B. (1978). *Theoretical sensitivity: Advances in the methodology of grounded theory*. Mill Valley, CA: Sociology Press.
- Holden, A., & Sparrowhawk, J. (2002). Understanding the motivations of ecotourists: The case of trekkers in Annapurna, Nepal. *International Journal of Tourism Research*, 4, 435-446.

- Hooks, B. (1995). *Killing rage: Ending racism*. New York, NY: Henry Holt and Company.
- Howell, A. J., Dopko, R. L., Passmore, H.-A., & Buro, K. (2011). Nature connectedness: Associations with well-being and mindfulness. *Personality and Individual Differences*, 51(2), 166-171. <https://dx.doi.org/10.1016/j.paid.2011.03.037>
- Huitt, W. (2009). *Self-concept and self-esteem*. *Educational psychology interactive*. Valdosta, GA: Valdosta State University. Retrieved from <http://www.edpsycinteractive.org/topics/regsys/self.html>
- Ivtzan, I., Lyle, L., & Medlock, M. (2018). Second wave positive psychology. *International Journal of Existential Psychology And Psychotherapy*, 7(2), 12.
- Ivtzan, I. (2015). *Awareness is freedom: The adventure of psychology & spirituality*. John Hunt/Changemaker Books.
- Kabat-Zinn J. (2013) *Full catastrophe living: How to cope with stress, pain and illness using mindfulness meditation*. UK: Hatchette.
- Kabat-Zinn, J., Lipworth, L., & Burney, R. (1985). The clinical use of mindfulness meditation for the self-regulation of chronic pain. *Journal of Behavioral Medicine*, 8(2), 163-190. <https://dx.doi.org/10.1007/BF00845519>
- Kahn, P., Ruckert, J., Hasbach P., (2012). A nature language. In P. Kahn & P. Hasbach (Eds.), *Ecopsychology: Science, totems, and the technological species* (pp. 55–77.). Cambridge, MA: MIT Press.
- Kahneman, D. (2011). *Thinking, fast and slow*. New York, NY: Farrar, Straus and Giroux.
- Kelly, C. (2018). ‘I need the sea and the sea needs me’: Symbiotic coastal policy narratives for human wellbeing and sustainability in the UK. *Marine Policy*, 97, 223-231.
- Kellert, S., Case, D., Escher, D., Witter, J., Mikels-Carrasco, J. & Seng, P. (2017). *The nature of Americans: Disconnection and recommendations for reconnection*. DJ Case & Associates.
- King, N., & Horrocks, C. (2010). *Interviews in qualitative research*. London, United Kingdom: Sage.
- Lomas, T., Hefferon, K., & Ivtzan, I. (2014). *Applied positive psychology: Integrated positive practice*. London, United Kingdom: Sage.
- Lomas, T., & Ivtzan, I. (2015). Second wave positive psychology: Exploring the positive–negative dialectics of wellbeing. *Journal of Happiness Studies*, 17, 1753–1768. <http://dx.doi.org/10.1007/s10902-015-9668-y>
- Lomas, T. (2015). Positive social psychology: A multilevel inquiry into socio-cultural wellbeing initiatives. *Psychology, Public Policy, and Law*, 21(3), 338-347.
- Lomas, T. (2017). The spectrum of positive affect: A cross-cultural lexical analysis. *International Journal of Wellbeing*, 7(3), 1-18. doi:10.5502/ijw.v7i3.608
- Lumber R., Richardson, M., & Sheffield, D. (2017). Beyond knowing nature: Contact, emotion, compassion, meaning, and beauty are pathways to nature connection. *PLoS ONE*, 12(5), e0177186. <https://doi.org/10.1371/journal.pone.0177186>

- Madill, A., Jordan, A., & Shirley, C. (2000). Objectivity and reliability in qualitative analysis: Realist, contextualist and radical constructionist epistemologies. *British Journal of Psychology*, *91*(1), 1-20. <https://doi.org/10.1348/000712600161646>
- Mayer, F. S., McPherson Frantz, C. M., Bruehlman-Senecal, E., & Dolliver, K. (2009). Why is nature beneficial? The role of connectedness to nature. *Environment and Behavior*, *41*(5), 607–643. <https://doi.org/10.1177/0013916508319745>
- Moen, F., & Allgood, E. (2009). Coaching and the effect on self-efficacy. *The Organization Development Journal*, *4*, 69-82.
- Naess, A. (1995). The apron diagram. In A. Drengson & Y. Inoue (Eds.), *The deep ecology movement: An introductory anthology* (pp. 11-12). Berkeley, CA: North Atlantic Books.
- Newton, N. (2010). *The use of semi-structured interviews in qualitative research: Strengths and weaknesses* [online]. Academia.edu. Retrieved from [http://www.academia.edu/1561689/The\\_use\\_of\\_semi-structured\\_interviews\\_in\\_qualitative\\_research\\_strengths\\_and\\_weaknesses](http://www.academia.edu/1561689/The_use_of_semi-structured_interviews_in_qualitative_research_strengths_and_weaknesses)
- Nichols, W. (2015). *Blue mind*. New York, NY: Hachette.
- Nisbet, E. K., & Zelenski, J. M. (2011). Underestimating nearby nature: Affective forecasting errors obscure the happy path to sustainability. *Psychological Science*, *22*, 1101–1106. doi:10.1177/0956797611418527
- O'Connell, T. (2010). The effects of age, gender and level of experience on motivation to sea kayak. *Journal of Adventure Education & Outdoor Learning*, *10*(1), 51-66. doi:10.1080/1472967100366928
- Passmore, H.-A., & Holder, M. D. (2016). Noticing nature: Individual and social benefits of a two-week intervention. *Journal of Positive Psychology*, *17*(6), 537-546. doi:10.1080/17439760.2016.1221126
- Parks, A. C., & Biswas-Diener, R. (2013). Positive interventions: Past, present, and future. In T. B. Kashdan & J. Ciarrochi (Eds.), *Mindfulness, acceptance, and positive psychology: The seven foundations of well-being* (pp. 140–165). Oakland, CA: New Harbinger.
- Pennington, W. (2009). *Executive coaching world: A global perspective*. London, United Kingdom: Chi Teaching.
- Piff, P. K., Dietze, P., Feinberg, M., Stancato, D. M., & Keltner, D. (2015). Awe, the small self, and prosocial behavior. *Journal of Personality and Social Psychology*, *108*(6), 883.
- Pollet, T., & Saxton, T. (2018). How diverse are the samples used in the journals ‘Evolution & Human Behavior’ and ‘Evolutionary Psychology’?. *OSF Preprints*. Retrieved from <https://doi.org/10.31219/osf.io/7h24p>
- Rudd, M., Vohs, K. & Aker, J. (2011). Awe expands people’s perception of time, alters decision making and enhances wellbeing. *Advances in Consumer Research*. *39*, 262-263.



- Ryan, R., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78. doi:10.1037//0003-066x.55.1.68
- Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. New York, NY: Free Press.
- Seitz, S. (2016). Pixilated partnerships, overcoming obstacles in qualitative interviews via Skype: a research note. *Qualitative Research*, 16(2), 229-235
- Shevchuk, N. (2008). Adapted cold shower as treatment for depression. *Medical Hypotheses*, 70(5):995-1001. doi:10.1016/j.mehy.2007.04.052
- Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology*, 65, 467–487. <https://doi.org/10.1002/jclp.20593>
- Sullivan, W. & Rees, J. (2008). *Clean language: Revealing metaphors and opening minds*. Crown House.
- Temu (Audio to Text Automatic Transcription Service & App). (2019). Retrieved from <https://www.temu.com/>
- Thapa, B., Confer, J., & Mendelsohn, J. (2004). Trip motivations among water-based recreationists. Paper presented at the *2nd International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas*. Rovaniemi, Finland. June 17-20. Retrieved from [https://www.researchgate.net/publication/237822881\\_Trip\\_motivations\\_among\\_water-based\\_recreationists](https://www.researchgate.net/publication/237822881_Trip_motivations_among_water-based_recreationists)
- Tipton, M. J., Collier, N., Massey, H., Corbett, J., & Harper, M. (2017). Cold water immersion: Kill or cure? *Experimental Physiology*, 102, 1335–1355.
- Ulrich, R. (1984). View through a window may influence recovery from surgery. *Science*, 224(4647), 420-421. doi:10.1126/science.6143402
- Valera, L. (2018). From spontaneous experience to the cosmos: Arne Næss' phenomenology, *Problemos*, 93, 142-153. doi:10.15388/Problemos.2018.93.11758.
- Valdesolo, P., & Graham, J. (2014). Awe, uncertainty, and agency detection. *Psychological Science*, 25, 170–178. <http://dx.doi.org/10.1177/0956797613501884>
- Vallerand, R., & Losier, G. (1999). An integrative analysis of intrinsic and extrinsic motivation in sport. *Journal of Applied Sport Psychology*, 11(1), 142-169. doi:10.1080/1041320990840295
- Wainwright. S. (1994) Analysing data using grounded theory. *Nurse Researcher*, 1(3), 43-49.
- Weinstein. N., Przybylski, A., Ryan, R. (2009). Can nature make us more caring? Effects of immersion in nature on intrinsic aspirations and generosity. *Personality and Social Psychology Bulletin*, 35(10), 1315-29. doi:[10.1177/0146167209341649](https://doi.org/10.1177/0146167209341649)

Wheeler, B. W., White, M., Stahl-Timmins, W., & Depledge, M. H. (2012). Does living by the coast improve health and wellbeing? *Health & Place*, 18, 1198-201.  
<https://doi.org/10.1016/j.healthplace.2012.06.015>

White, M., Bell, S., Elliott, L., Jenkin, R., Wheeler, B., & Depledge, M. (2016). The health benefits of blue exercise in the UK. In J. Barton, R. Bragg, C. Wood, & J. Pretty (Eds.), *Green exercise: Linking nature, health and well-being* (Chapter 7). Abingdon, United Kingdom: Routledge.

Wilber, K. (1997b). An integral theory of consciousness. *Journal of Consciousness Studies*, 4(1), 71-92.

Wilson, E. (1984). *Biophilia*. Cambridge, MA: Harvard University Press.

Wong, P. T. P. (2010). What is existential positive psychology? *International Journal of Existential Psychology and Psychotherapy*, 3, 1–10.

Wong, P. T. P., & Roy, S. (2017). Critique of positive psychology and positive interventions. In N. J. L. Brown, T. Lomas, & F. J. Eiroa-Orosa (Eds.), *The Routledge international handbook of critical positive psychology*. London, United Kingdom: Routledge. Retrieved from <http://www.drpaulwong.com/critique-of-positive-psychology>