

Research Article

# Where the Tides of Life Make Sense: Insights from Surfers in Hong Kong

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## Abstract

Surfing is becoming increasingly popular, and is alleged to provide personal, social, environmental and economic benefits to an estimated 35 million surfers and thousands of coastal communities worldwide. Anecdotal evidence suggests that surfing is associated with positive mental and physical outcomes, greater community cohesion, health-promoting lifestyles and better ocean stewardship. However, despite its popularity, there is limited scientific research to date investigating the outcomes of surfing, particularly in Asia. This project aims to assess the effects of surfing in Hong Kong (HK) on its people, the community and the environment. Thus, adopting an underlying social constructivist framework, this mixed-method study collected online survey material from 106 participants investigating the personal, social and environmental outcomes of surfing in Hong Kong. Quantitative survey findings indicate that surfing had a positive effect on participants, particularly in terms of their personal lives and environmental awareness. Thematic qualitative analysis from open-ended survey questions and semi-structured interviews suggests that surfing has a positive effect on psychosocial wellbeing and environmental awareness. However, surfers are bewildered at the rationale behind the ban on surfing in HK, particularly since its inclusion as an Olympics sport and given that it is actively promoted in Mainland China. It is hoped that this research will draw attention from the public and policymakers into the importance of surfing in terms of psychosocial wellbeing and environmental protection.

## Keywords

Community, Environment, Psychosocial, Social Constructivist, Surf, Wellbeing

## 1. Introduction

Partly due to its inclusion in the Olympics Sports List and following a COVID-19-driven search for healthier lifestyle choices, surfing is becoming increasingly popular worldwide [1]. With its origins stemming from Polynesian and Peruvian indigenous practices [2], recent estimates by the International Surfing Association (ISA) suggests that there are approximately 35-50 million surfers worldwide [3, 4].

However, considering the global popularity of the sport, there has been relatively modest research conducted on surf-

ing. A few studies conducted over the past two decades have reported that surfing provides personal, social, and economic benefits [5-8]. Evidence also suggests that surfers also play a role in ocean stewardship and citizenship as first-hand-observers of environmental change [1, 9-11]. Thus, understanding the personal experience of surfers presents a fascinating subject for investigation.

\*Please note that the physical benefits of surfing, (including but not limited to cardiovascular fitness, strength, balance,

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coordination, core strength, flexibility and endurance) are well documented and beyond the scope of this study. Thus the main focus of this research will be on psychosocial outcomes and environmental awareness.

## 1.1. Theoretical Framework

Due to the inherent complexity of human behaviour and motivation, no one single theory is entirely able to explain behaviour. Thus, an underlying social constructivist framework provided the ontological framework for data collection. Drawing on Self-Determination Theory (SDT) [12], Sense of Coherence (SOC) [13] and Ecological Dynamics Perspective (EDP) [14], this research investigated the personal, social and environmental outcomes of surfing in Hong Kong (HK). While SDT suggests that people are intrinsically motivated when their needs for autonomy, competence and relatedness (connection) are supported, SOC refers to an individual's ability to comprehend, manage and find meaning in their lives and the world around them [15]. EDP, as a multi-disciplinary theory that implements concepts from dynamical system theory, ecological psychology and complex system in neurobiology [16], takes into account the interactive relationship between the individual, their characteristics and experiences, the task (e.g. surfing) and the environment to explain individual differences in performance, learning and behavioural change. Together these theories allowed for data collection and analysis in the 'real world' setting of surfing.

## 1.2. Literature Review

### *Personal Benefits of Surfing*

Active nature-based pursuits have been shown to have positive physiological, psychological, spiritual and emotional outcomes [7, 17]. These health benefits have been well documented among surfers [6, 18-20], with researchers suggesting that it is the immersive nature of surfing in blue spaces that influences and produces wellbeing [5]. For many, the surf zone is not just a place, but also a space of spirituality, acting as an important resource for human flourishing [21].

There are the obvious benefits associated with physical activity, but the perks of surfing extend beyond the physical wellbeing. In recent years, a number of countries have developed surf therapy for dealing with mental health concerns [22-24] including improving social skills in children with Autism Spectrum Disorder (ASD) [25] increasing personal wellbeing among at-risk youth [26-29] coping with post-traumatic stress, depression and anxiety in members of the defence force [30] and for use with children with disabilities [31]. Although these preliminary findings are promising, they are limited by methodological concerns (e.g. small sample size and lack of control groups). Moreover, the physiological and psychological processes underpinning the positive effects of surfing remain unclear.

In an attempt to address this, Moreton et al [32] explored potential causal processes which could explain the psychotherapeutic effects of surfing. They highlighted and reviewed the following potential causal mechanisms through: physical exercise; immersion in water/natural environments; exposure to natural light; reduction in rumination; flow states and satisfaction of basic needs (autonomy, relatedness and competence; components of SDT). As humans, we are motivated by three fundamental psychological needs: relatedness, competence, and autonomy and when these are thwarted, our mental health suffers. The authors maintain that, as surfing can help satisfy these basic requirements, it may be a beneficial activity to prevent and manage a wide range of mental health concerns. Despite not fully understanding the mechanisms of how surf and surf therapy contributes to personal wellbeing, the literature suggests that surf programmes allow for a shared experience which enhances a shared identity and sense of belonging [5, 28, 33]. Affective bonds develop from enjoyable surfing experiences and this sense of connection to others, nature and place helps to satisfy the basic human need of relatedness [32].

### *Social/Community benefits of surfing*

Surfing isn't merely about catching waves; it is also about connecting with others who share the love for the ocean. Whether you are a beginner or an experienced surfer, there is a bonding and camaraderie over the shared 'stoke' which fosters a sense of social belonging, cultivating positive interpersonal relationships [18, 34]. Research suggests that surfing creates a "social fabric", which helps in defining individuals and communities [35]. In examining the social construction of identity among surfers, [36] suggested that "symbolic capital" (i.e. skills, sub-cultural knowledge, commitment and local affiliation) contributed to a sense of belonging. Conversely, those who did not demonstrate this symbolic capital were excluded from the group. Previous studies have found evidence of surfer localism [37], where surfers are protective about the liminal space of their local surf break from outsiders, with localism-aggression reported particularly in popular surf destinations [38]. However, there are also accounts of surf tourists or migrant surfers negotiating positive interactions and bonds with local surfers [18], leading researchers to suggest that localism is complex, with simultaneous contradictors for anti- and prosocial interactions [38]. The process of local surfer identity formation centres on specific socio-spatial qualities including place, space, time and territory [39].

Surfers have often been criticised as being non-conformist and living in contrast to the communities in which they live [40, 41]. However, studies have shown that when constructing their local surfer identity, surfers sought a sustainable surfing environment not only with the surf breaks but also with the community in which they live [39]. Beaumont and Brown [34] undertook a qualitative ethnographic study on a village in Cornwall, United Kingdom (UK), focussing on local surfers' interaction with the wider rural community and found a strong

sense of *communitas* between local surfers and non-surfing locals, which was expressed through the shared experience of the place (sea, beach, break) and village life. Local surfers were, in fact, instrumental in constructing and maintaining the broader community of which they were a part. This finding corresponds with Stranger [42] who suggested that this “collective consciousness” occurs globally due to the surfers’ shared knowledge and experience of self-transcendence – ‘a sublime loss of self in the act of surfing’ (pp 1119).

From a societal perspective, surfing has been shown to not only contribute to greater community cohesion and intra-family relationships, but also to accelerate economic growth [1]. Manero et al [4] assessed the economic and wellbeing outcomes of recreational surfing in Australia and found that adult surfers directly contributed an estimated AUD2.71 billion per year into the economy, while statistics in other ‘surfanomics’ studies reveal that the surf tourism industry today contributes more than \$5 billion to global economy [2, 9, 10, 43].

#### *Environmental benefits*

Surfing, for the most part, has a positive effect on marine and coastal systems with research demonstrating that extreme sports, like surfing, conducted in natural environments leads to an increased respect for nature and an altered perspective on the relationship between humanity and nature; recognising that humanity is part of, as opposed to separate from, nature [44]. Knowledge and an appreciation of the ocean is essential to surfing and as such, most surfers feel a particular connection with the ocean, its inhabitants and nature in general [45]. Other studies found that children and adolescents who participated in outdoor blue spaces learned to interpret nature, climate conditions and meteorology [46].

The ability of marine and coastal ecosystems to provide recreational sports such as surfing is dependent on the management and sustainability of those ecosystems to ensure they remain clean and healthy [47]. Surfers are able to provide local environmental data to aid coastal management [48] or to assist projects related to the impact of rising sea-levels [49, 50]. Research findings have also shown how surfing creates communities of activists who protect the ocean [5, 9, 51-55]. Surfers’ environmental activism promotes sustainable environment practices and the protection and safeguarding of natural resources [39, 47, 56]. As first-hand-observers of environmental changes, surfers play a significant role in marine environmental stewardship [1, 11]. Moreover, studies on human-nature interactions illustrate that the understanding of, and connection with, nature are important in shaping identity. Research has demonstrated that surfing fosters a deep sense of place which influences environment attachments and, in some indigenous cultures, ancestral connections too [11, 57].

### 1.3. Context of the Study

Hong Kong, as a major gateway to, and special administrative region of, Mainland China, is a vibrant financial hub

comprising more than 260 islands, many uninhabited. At 733 kilometres, HK’s coastline is the longest of any global city, making it an ideal oceanic sporting destination. And yet, surfing is prohibited at any of the 42 government gazetted beaches, only two of which have surfable waves (Big Wave Bay and Shek O). According to the Bathing Beach Regulations [58] (Cap. 132 sub. Leg E) (“the Regulation”) Sections 11(1) and 16 of the regulation, which focus on the protection of areas designated for swimmers, there are specific offences and penalties associated with violations. The Regulation states that “no person shall, without reasonable cause or excuse, bring or use, or allow the use of any surfboard in any part of the waters adjacent to bathing beaches set aside for swimmers, as designated under Section 10(1). Any individual who contravenes Section 11(1) of the Regulation, or without a reasonable excuse, fails to comply with the requirements of a notice posted under Section 4(2) is guilty of an offence and is subject to a fine of \$2,000 and possible imprisonment for 14 days” [58].

Conversely, since surfing was included in the 2020 Olympic games, there has been a vast increase in surfing in China, including the development of a national team [8], with teenager, Yang Siqi, becoming the first-ever surfer to represent China at the 2024 Olympic Games [59]. HK has always been strong in oceanic sports, winning their first Olympic gold in windsurfing in 1996 [60], which makes the current prohibition of surfing somewhat bewildering.

#### Rationale for the study

Despite the growth of surfing in China [43], related academic research has lagged. While there have been a few studies on surf tourism in China in recent years [8, 43, 61], there remains a paucity of theoretical attention to outcomes of surfing. In fact, to the best of the researcher’s knowledge this is the first empirical study investigating the outcomes of surfing in the region.

Thus, this project aims to assess the effects of surfing in Hong Kong on its people, the community and the environment. It is hoped that this research will draw attention from the public and policymakers into the importance of surfing in terms of psychosocial wellbeing and environmental protection.

## 2. Methodology

### 2.1. Research Design

This study adopted an exploratory mixed-method research design to assess the effects of surfing in Hong Kong on its people, the community and the environment.

### 2.2. Participant Recruitment

Participants (N=106) were recruited through social media platforms (e.g. Facebook, Instagram and LinkedIn) and subsequent snowball sampling. From this pool of participants, a

smaller sample (N=5) was selected via purposive sampling for in-depth semi-structured interviews. This was done to ensure that the sample was representative of the surfing population in terms of teaching experience, demographics and opinions. All participants were required to be 18+ years of age and to have surfed in Hong Kong. Demographic data were gathered from the survey, comprising the following variables: age, gender and surfing experience.

**Table 1.** Participant Characteristics.

Characteristics	N	%
<i>Age (years)</i>		
18-24	13	12.26
25-35	29	27.36
35-44	31	29.25
45-54	23	21.7
55-64	9	8.49
65+	1	0.94
<i>Gender</i>		
Female	21	19.81
Male	84	79.25
Non-binary	1	0.94
<i>Surfing experience</i>		
Beginner	16	15.09
Intermediate	54	50.94
Experienced	36	33.96

#Although responses to nationality and occupation were optional, the largest representation came from Hong Kong, followed by British, Australia, United States of America (USA), Chinese, French and South Africa (SA). There was no overall trend for occupation and participants' responses ranged from retired to unemployed to finance, education, engineering, aviation, sports and marketing.

### 2.3. Survey Instrument

A purposefully designed, self-report survey contained 23 questions, with opening questions relating to sociodemographic and surfing experience. Employing a 5-point Likert scale, participants were asked to rate the influence that surfing has on their personal, social/community life and environmental awareness. They were then asked to what extent their surfing experience has affected them in terms of self-awareness, communication, emotional regulation, resilience, social skills, empathy and understanding of others, self-confidence, decision making, spiritual growth/awe,

knowledge and appreciation of nature, and appreciation of the simple things in life.

Open ended questions included:

1. What 3 words come to mind when you think of your experience of surfing? (Q21)
2. Do you have any suggestions on how policy makers can promote surfing in Hong Kong? (Q22)
3. Do you have any other comments regarding surfing in Hong Kong? (Q23)

### 2.4. Ethical Considerations

Ethical approval was granted through the relevant institutional research ethics board. Prior to the completion of the survey, participants were informed of the aims of the study and the voluntary and anonymous nature of participation. Confidentiality of the collected data was assured and informed consent was obtained. The informed consent also contained information to facilitate contact with the researcher and institution if any clarification was required at any point of the study. The data will be stored securely for five years as required, with access limited to the researcher, and data used solely for the purposes of this study.

### 2.5. Data Collection and Analysis

Data was collected between 28<sup>th</sup> November – 6<sup>th</sup> December 2024. This was done via online surveys and followed up with semi-structured interviews via Zoom calls. The survey was self-paced and took approximately 10 minutes to complete. Interviews typically ranged between 45-60 minutes. The survey included both categorical and open-ended items. Categorical data were analysed with bar or pie charts, while qualitative data from surveys and semi-structured interviews was transcribed verbatim. Qualitative data were analysed using [62] thematic analysis, which included: familiarisation with the data; generating initial codes; searching for themes; reviewing themes; defining and naming themes and producing the report.

### 2.6. Reflexivity

As an intersubjective reflection, reflexivity is an important factor in improving the rigor and trustworthiness of qualitative research. This refers to the researcher's reflections on influences that may have affected the design, collection and interpretation of the data (i.e. personal background, beliefs, values and biases). The researcher is cognisant of their own opinions, preconceived ideas and assumptions as well as recognising the role of their own reflections on the findings. As a beginner surfer living in HK and having conducted extensive research on the psychosocial benefits of outdoor pursuits, it was impossible to fully remove myself as the researcher from this study. Whilst every attempt was made to allow the findings to emerge from the data, the inquiry was undoubtedly shaped in part by personal values.

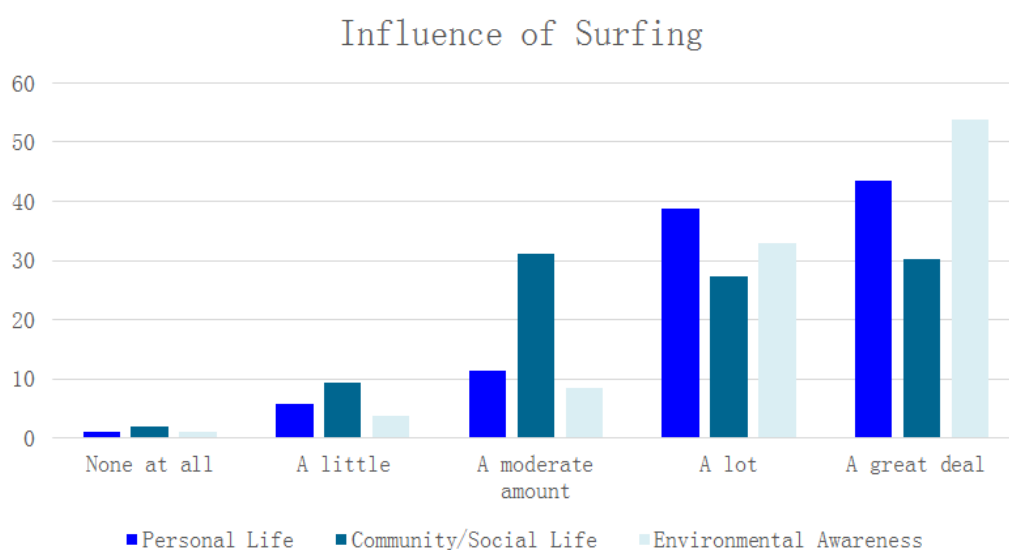
### 3. Findings and Discussion

#### 3.1. Quantitative Results

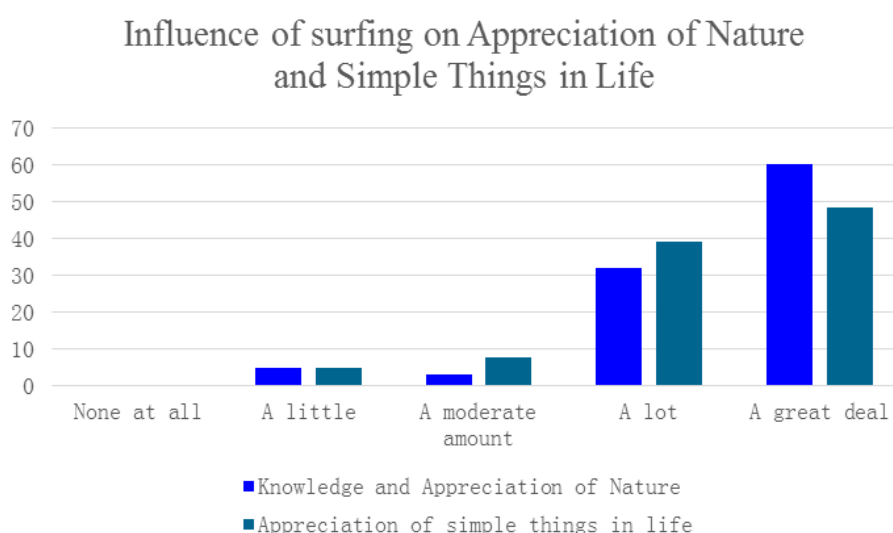
Results from participants' survey responses on whether or not their experience of surfing has influenced their personal lives, community/social lives and/or environmental awareness are illustrated below.

More than 82% responded that surfing influenced their personal lives "a lot" or "a great deal". Although there was a

more moderate influence on community/social lives, 87% reported that surfing influenced their environmental awareness "a great deal" or "a lot" (see [figure 1](#)). This was corroborated by responses to the survey questions "To what extent do you feel that your surfing experience has affected you in terms of Knowledge, Understanding and Appreciation of Nature?" where 92.5% responded "a lot" or "a great deal" and 88% to an appreciation of the simple things in life (see [figure 2](#)).



**Figure 1.** Influence of surfing on personal life, social life and environmental awareness.

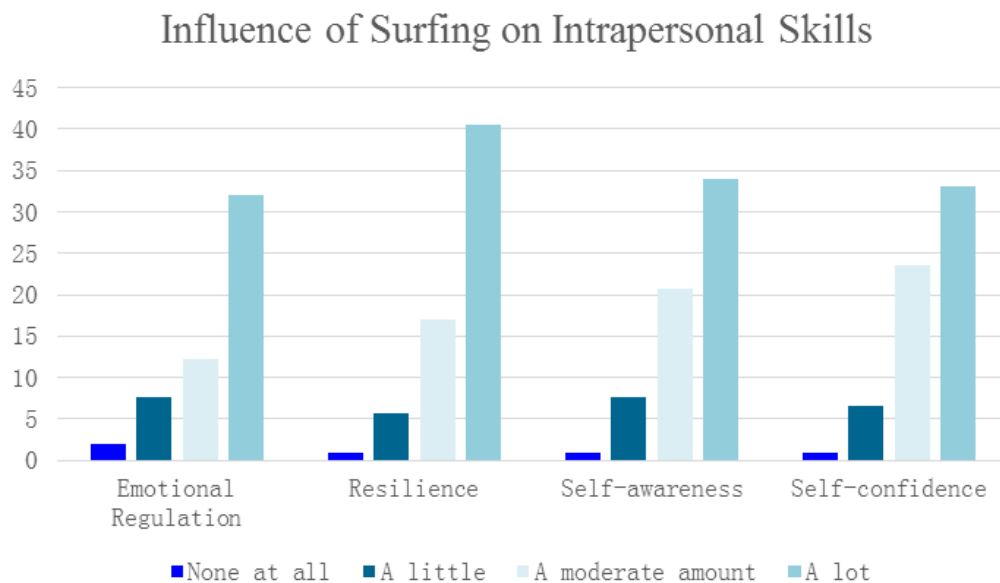


**Figure 2.** Influence of surfing on appreciation of nature and simple things in life.

Survey responses pertaining to intra and interpersonal skills varied with 78% reporting that surfing had influenced emotional regulation "a lot" or "a great deal", 76% for resilience, 71% for self-awareness, 69% for self-confidence and 63% for

spiritual growth/awe (see [figure 3](#)). The influence of surfing on communication, empathy and social skills were more moderate with approximately one-third of participants reporting "a moderate amount".





**Figure 3.** Influence of Surfing on Intrapersonal Skills.

### 3.2. Qualitative Findings and Discussion

As expected from qualitative data, prevailing ideologies and individual differences resulted in different opinions and experiences. In order to glean an overall understanding of how participants felt about surfing, a word cloud was generated

from the survey responses requesting three words that came to mind when thinking of their experience of surfing. The most frequently used words are depicted bolder and bigger (see figure 4). Thereafter, adopting the acronym STOKED (Stoke, Tranquillity, Outlet, Kinship, Environment, Decree), themes will be explored with references both to the evidence in the data, as well as to links made to the literature.



**Figure 4.** Word cloud illustrating participants' responses to surfing.

### Stoke

There are many surfing terms, but one that arguably embodies the surfing experience is 'stoked': an expression of pure joy, of freedom and the sheer exhilaration felt by surfers during and after a good surf session. As seen from the word cloud, (see figure 4), joy, freedom, exhilaration and happiness were frequently expressed words which the participants used when describing surfing experience. Research suggests that, regardless of age or experience, surfers share the feeling of 'stoke', of being in the zone and at one with the environment [21, 63]. Below are a few examples from the survey responses to the question "what 3 words come to mind when you think of your experience of surfing?"

*Respondent 2: joy, peace, freedom*

*Respondent 9: stoked, fun, relax*

*Respondent 21: stoke, freedom, nature*

*Respondent 97: exhilaration, calm, connection*

This sense of stoke was corroborated in the semi-structured interviews with respondents suggesting that surfing allowed participants to be "totally integrated into whatever's going on". Consistent with research on the mystical and sublime experiences of extreme sports, participants expressed a sense of awe and transcendence while surfing. This heightened sensory experience [33] or altered state of consciousness (ASC) can be likened to a Zen state, a peak experience or Csikszentmihalyi's [64] state of flow. As an autotelic experience, requiring the balancing of challenge and skill, unambiguous feedback and total concentration on the task, one can appreciate how surfers experience "being in the zone".

As participant A suggests:

*It's definitely got a post-surfing sort of afterglow that no other sport or physical activity has...But yeah, I think that the joy you get from surfing is just incomparable to anything. I've done a lot of sports and a lot of like, physical and mental stuff, but I don't think anything has come close to the life satisfaction and the immediate joy that I've got from surfing.*

For many surfers, the stoke mentality extends beyond the beach as it exemplifies the laid-back, relaxed lifestyle that has come to define the surfing community. For many, surfing is more than a sport, it is a pathway to self-discovery [32].

*It's like shown me a whole different side of life that I wouldn't have imagined existed before, both in terms of, like, personal ambition, but also in terms of realizing what actually matters and what makes me happy. So, yeah, I'd say it's totally changed my life over the last five or so years*  
- Participant D

Stoke is about embracing life's ups and downs, of finding that tranquillity. This is consistent with EDP theory, with research proposing that immersion in the ocean aids the feeling of peace and calm [65].

### Tranquillity

Surfing and mindfulness both entail being fully present in the moment, with surfers reporting feeling calmer after

catching a few waves [66]. While immersion in nature has long been shown to facilitate wellbeing, researchers have found that "blue spaces" are especially beneficial [4, 9, 67-70]. The endorphins, adrenaline and serotonin received from surfing, combined with the dopamine reward of catching a wave helps surfers feel good [32]. Research has demonstrated that surfing presents 'grounding' or anchoring properties [69], pp16 with many countries implementing surf therapy to address mental health concerns [23-24, 71] and improve personal wellbeing [27-29].

Tranquillity refers to an untroubled state, a state of peace and quiet, free from stress or emotion. Survey responses indicated that many participants found this sense of peace and calm while surfing as illustrated below:

*Respondent 35: peaceful, content, fun*

*Respondent 50: calming, meditative, focussed*

*Respondent 61: peace, meditation, nature*

*Respondent 86: zen, calm, beauty*

Research has shown that the wild untamed spaces of the open sea provide a place of escape [21]. Findings from this study support this notion that surfing allowed them the freedom to (temporarily) escape from life's stressors [69] as eloquently stated by participant E:

*And I think it's almost a cliché but like when you enter the water, you leave your land-based problems and life behind. There is like a real kind of mental, psychological demarcation that goes on.*

For participant A, surfing provided a sense of purpose:

*I think it's given me a lot of purpose in life. It's like shown me a whole different side of life that I wouldn't have imagined existed before, both in terms of, like, personal ambition, but also in terms of realizing what actually matters and what makes me happy. So, yeah, I'd say it's totally changed my life over the last five or so years.*

While for participant B, life altering:

*Surfing has saved my life quite a few times. It's pulled me back from an edge, and that is why I keep going. That's what keeps me going with surfing.*

### Outlet

Research suggests that surfing provides an outlet physical and emotional outlet [1, 71]. The physicality and exhilaration of catching a wave can provide a healthy means of emotional expression, allowing individuals to channel their emotions into the powerful energy of the ocean. This combination of physical exertion, adrenaline and being in nature provides a cathartic experience that contributes to overall health and wellbeing [4, 69, 72]. Central to both SDT and SOC, the development of skills and feelings of mastery are fundamental to a sense of wellbeing. Moreover, dealing with uncertainties, facing challenging conditions and overcoming wipeouts builds patience, perseverance and resilience [73].

This was evident in the quantitative data (see figure 3) where respondents reported that surfing had influenced their

emotional regulation and resilience. This was also apparent in the 3-word survey responses:

*Respondent 16: solitude, humbled, tenacity.*

*Respondent 42: challenging, endurance, blissful*

*Respondent 75: calming, anti-depressant, fun*

*Respondent 92: harmony, outlet, mindfulness*

Open-ended responses in the survey included participants referring to the balance that surfing brings to their lives, allowing them to “de-stress and re-centre” themselves and how surfing transformed their life from “a focus on nightlife and decadence to early mornings and fitness”. Others were saddened “to see the surfing ban reduce the number of physically and mentally healthy sport options for HK residents”, urging policy makers to “understand the mental, physical and social benefits” of developing a surfing culture in Hong Kong and “realising the positive impact that surfing, ocean swimming, being close to nature, has on mental health”.

All of the above were further substantiated in the semi-structured interviews as illustrated by the following comments:

*It's an amazing thing for character-building (participant D).*

*I've seen scary things. I've overcome fears (participant B).*

*Rejuvenates you mentally and physically (participant C).*

*It's the holistic approach of what surfing is. If I was to talk about how it's impacted my life, it has helped me with mental health. It has helped me with physical health. It's helped me with financial health....definitely with spiritual health. Well, I think spiritual is like what holds [it] all back together (participant B).*

*And I think it's almost a cliché but like when you enter the water, you leave your land-based problems and life behind. There is like a real kind of mental, psychological demarcation that goes on (participant D).*

Mental health benefits of surfing are thought to arise from a sense of accomplishment, respite from day-to-day stressors, the physiological neurochemical responses of surfing and an increased sense of social connection [67, 74].

#### *Kinship*

Kinship is associated with social belonging, how people relate to one another and their surroundings, with the objective of creating a cohesive and harmonious community. For the purposes of this study, kinship refers to having a sense of connection and belonging with others through shared experiences, effectively satisfying the basic need of relatedness [12, 75]. Despite being a heterogeneous population, surfers the world over share a common interest in riding waves [6]. Research has shown that surfing provides opportunities for developing and strengthening interpersonal relationships by facilitating social interactions [32] and helps foster social connectedness [18, 66] and a deeper connection with the community [45]. Moreover, studies suggest that being in beautiful natural environments increases prosocial behaviour and reduces aggression [8, 76]. Indeed surf therapy pro-

grammes have found that surfing strengthens social connectivity with surfing peers [22, 77].

Whilst the quantitative data revealed a more moderate influence on community/social lives, more than 57% reporting that surfing influenced this aspect of their lives “a great deal” or “a lot”. Participant responses to question 21 included several mentions of friends and community as illustrated below:

*Respondent 22: community, adventure, comfort*

*Respondent 56: community, nature, happiness*

*Respondent 62: magical, community, health*

*Respondent 83: waves, friends, joy*

This sense of kinship was corroborated by the open-ended survey questions with participants saying that HK has an “amazing surfing community”, “generally a benevolent one, comprised of professionals and participants from all walks of life”. They argue that surfers are an integral part of the local community, bringing people together and supporting local businesses. Most of the references were made in connection with Big Wave Bay, (BWB) with many participants mentioning that the proximity of the beach to the ‘megacity’ is an asset to Hong Kong that needs to be celebrated and supported:

*Big Wave Bay is iconic, its history of surfing, its local characters, identity and community need to be celebrated and supported (participant C).*

This sense of community in BWB was echoed in the semi-structured interviews with participants suggesting that, despite coming from all walks of life, there was a commonality in surfing, a love and appreciation for nature, particularly the ocean. This is consistent with Beaumont & Brown's study [34] which found a strong sense of community between local surfers and non-surfing locals through the shared experience of the beach.

*It's totally changed my friend circle, and I also really enjoy living in, like, a community-centric place in HK, which is not very common. So yeah, and everyone sort of is brought together by surfing here, at least in some way or the other... even if they're not surfers, they're here because of the waves and the ocean, and by the beach sort of thing (participant A).*

*Living in Big Wave Bay, it ends up almost being more about the intangibles than the actual surfing, right? You can walk to a beach. There's, it's like a quaint, third-world village vibe. There's beautiful hiking trails. I mean, we do everything in the ocean. We open-ocean swim, we spearfish, we free-dive. So I guess it's just if anything, I would say more embracing, maybe, the island lifestyle (participant D).*

However, surfing can cause adverse social outcomes, particularly as waves are a limited resource to which anyone can gain access. This often results in contentious and stressful interactions, where local surfers aggressively protect their surf break [38]. This was alluded to in the interviews, particularly in BWB as it is a small beach where “everybody's fighting over a finite resource” (participant E). There were some reports of surfers opting to leave BWB as it was not conducive



to their mental health, whilst acknowledging the inherent difficulty for the surf community to manage this resource.

An added difficulty was defining who represents a local. Whilst the population of HK is predominantly ethnically Chinese, there are many <sup>#</sup>Gweilos that live and surf in BWB. This concept and confusion of what represented ‘local’ versus non-local was raised a few times during the interviews but ultimately, it was those that lived in the village that were regarded as local as evidenced from this excerpt:

*She was screaming at some guy saying, ‘It’s locals only.’ And this poor guy, he just kind of looked at me. And he had actually moved into the village. So I said, ‘He lives here in the village. He’s more local than you.’ (participant E).*

<sup>#</sup>Gweilo is Cantonese slang for Westerners

#### Environment

Corroborating previous research which suggests surfing has positive effects on the marine and coastal environment [1, 5, 11, 47, 56], the quantitative results indicate that the biggest outcome for participants of this study was the influence that surfing had on their environmental awareness and appreciate of nature (see figures 1 and 2).

This was validated in the open-ended questions and semi-structured interviews, where participants not only appreciated the waters of HK but felt that surfers contributed to preserving the environment, that they are: “*the backbone of water safety, cleanliness and community in Hong Kong*”. Participants reiterated how surfing influences their environmental awareness, appreciation and stewardship as the following excerpts illustrate:

Respondent 56: *HK is a beautiful place, surfing is a great way to gently experience HK’s beauty and makes you want to treasure the place.*

*People aren’t in touch with nature. They don’t go outside. They’re afraid of the bugs. Afraid of the dust. They’re afraid of sand. They’re afraid of the heat. They don’t like the sun. So when you get those who do like it, and get them into the environment, then they start to be interested, to protect that space, so they like it. They enjoy it. They want to go more. They bring their friends. Then they ask the question, ‘Why is there plastic bags and shit in the water? Why is the water so polluted?’ You know, without that kind of touch, people don’t, don’t react (participant C).*

*I would say surfing has definitely made me more marine conscious, you know, using less single-use plastics, because I’ve travelled around the world itself, and you go to, like, third-world countries and see the amount of garbage that’s in their seas, while surfing (participant A).*

Previous research has demonstrated that surfing facilitates a profound and positive understanding of self and one’s place in the environment, fostering environmental attachment [11, 44], as eloquently stated in this extract:

*And the ocean, and being in nature, and being a part of home was always accessible through surfing. It was a place that I felt accepted in. It was a place that, it just, I felt a true*

*sense of belonging, and it was a place that was always there with open arms (participant B).*

Managing marine and coastal systems is fundamental to providing recreational sports such as open-water swimming and surfing [47]. Participants suggested that the government developed environment education programmes to teach people ocean awareness and water safety as well as sustainable practices and marine conservation. Many felt that HK, with its extensive coastline, provides an ideal environment for ocean sports and eco-tourism and should be promoted as such. Interviewees concurred, suggesting that HK should capitalise on this asset.

*But, you know, HK should be proud that there is surfing. Most people in the world would never even think that HK had surfing... they should be proud that the waters are now cleaner than they used to be. So they should be proud people wanting to use the water. They should be proud that our youth are getting into the water, you know, for swimming or surfing or wakeboarding, or, you know, all these things. And that should be one of HK’s big assets... (participant C).*

10-year old surfing *wunderkid*, and Olympic hopeful, Mahohi Nguyen Tang has joined the Swiss junior national team since the surfing ban in HK was enforced [78]. Participants expressed concern that the ban has resulted in many surfers to leave HK and surf elsewhere.

*HK has the ability to hold a rich surfing experience, but if you want to do that, somewhere like Bali would be better off to do that. Somewhere like Hawaii. And that’s what a lot of surfers in HK do, is they leave to go and surf. But that’s not HK surfing. That’s leaving HK (participant B).*

Surfers are perplexed as to the rationale behind the current enforcement of the regulation, questioning whether there was any proof of an incident to warrant the ban. A major issue that emerged from the research was the lack of communication between policy makers and HK surfers as the following section will attest.

#### Decree

The most resolute consensus from this study was that the surfing ban in HK was unreasonable and should be lifted. In June 2024 the Leisure and Cultural Services Department (LCSD) erected new “no surfing” signs at Shek O and Big Wave Bay beaches, and in October 2024, two surfers were apprehended for violating the ban during a red-flag period (meaning the water was deemed unsafe for swimming). Despite the official regulations stating that surfing activities are banned at these beaches, this ruling has only recently been enforced, leaving surfers bewildered as to why now? [79]

The appeal from most participants was to lift the ban, as illustrated by these statements:

Respondent 11: *Don’t make it illegal*

Respondent 55: *DON’T BAN SURFING*

Respondent 80: *Let people surf – no need to ban surfing or enforce a ban.*

Respondent 90: *Don't ban it. Trust the experts, the surfers know their limits. Promote surf etiquette and limit rental.*

Many participants from the survey found the outright ban “too draconian”, arguing that “to have non-surfers in office making policy for something they have no idea about without consulting with people in the field they are implementing policy for does not make sense” (participant D). Others were fearful of standing up against the ban, questioning whether this could result in ruining the little bit of fun that they do have.

Archival newspaper articles suggest that there was an incident in BWB in 1997 involving an out-of-control surfboard injuring a swimmer which resulted in the implementation of the ban. This resulted in the formation of the Hong Kong Surfing Association (HKSA) which successfully lobbied the government in setting up demarcated surfing and swimming areas [79]. Although acknowledging the difficulty of doing so due to so many differing opinions, interviewees suggested setting up a governing body to represent surfers of HK, something that was in place in the late 1990's.

*We don't have a surf federation. It actually has ceased to exist. It did exist, and if you're to look on Facebook you can find evidence of the Hong Kong Surf Federation that once was. And it is no longer, and it states that very clearly. So the issue now is that one needs to be created (participant B).*

Moreover, as many participants attest, surfers generally know their limits, even during typhoons, and in fact surfers are often the ones who save swimmers and yet swimmers are not prosecuted for entering the water, despite many more swimmers drowning at beaches than surfers [80].

*....and people who know how to surf, they go where the waves come and the waves come on these typhoons nearby....They're totally manageable. Any surfer who knows how to surf when they go to Big Wave Bay, and it's too big, because you can see the water washing off the walls. No one goes in the water. Everyone totally respects it. They know how to deal with it, and they don't go in (participant C).*

*It was Typhoon 3, and there's two surfers out there, but there was like, five or six people. At least five people in neck-deep water, just sort of, you know, just jolling around, and it's just such a head-scratcher, because, like, why are the surfers getting fined? (participant A).*

A number of respondents provided suggestions on how to promote surfing in HK including open communication, education and youth programmes, building wave pools or creating artificial surfing reefs and sponsoring local events and athletes. Many participants felt that HK should follow China's lead and place surfing under the HK Olympics committee. The consensus seemed to be to implement sensible regulations including dedicating certain beaches to surfing and others to swimming; allowing surfing at beaches in winter and swimming in the summer months; demarcating certain sections for surfing and others for swimming. However others argued that keeping some part of the beach as a surf zone and some as a swim zone may not work as it depends on “swells, and the conditions, there's different parts of the beach work-

ing in terms of waves” but felt that a fair compromise would be “November to April being surf season, or even October maybe. And then the summer months being purely for swimmers” (participant B).

The overall consensus from open-ended questionnaire responses to the interviews, was to allocate BWB as a surfing beach, with swimmers entering at their own risk.

*There's no other beaches in HK that you can surf out at, anyway, that are gazetted. So all we need to do is open this one beach. The other point of the matter is people do not go swimming in Big Wave Bay. As swimmers, they go there to wade and dance around in the water. They're not swimmers. They're not going there to do laps. They're not going there as a real swimmer (participant C).*

Having established their own “code of conduct”, surfing has traditionally been free of legislative intervention and legal consequences. Feeding into this sense of autonomy, one of surfing's greatest attractions is the ability to detach from the bureaucracy that people generally contend with in their daily lives. Caprara [81] pp 30 unequivocally states: “The bottom line is that, to the extent possible, surfing and the law should not be mixed.” While research on surfing regulation is limited, studies suggest that surfers across the globe are highly self-regulated, adhering to the accepted rules and customs [82].

However, with the substantial increase in the number of surfers in recent years, there is greater potential for conflict between surfers and swimmers, resulting in a number of beaches in Australia and USA implementing regulations to protect both surfers and swimmers [83].

#### Limitations and Future Research

Although this study is the first of its kind to explore the effects of surfing in Hong Kong on its people, the community and the environment, there are several limitations of this study that need to be noted. Due to the investigative nature and its execution within the real-world situation, the research is limited to surfers in HK and thus the results may not be generalisable across other populations or settings. The online survey produced a data set that cannot be considered random or representative and there is no way of knowing what the response rate was or how many chose not to respond. Furthermore, although there was an option to complete the survey in Chinese, the initial content was in English which meant it may have limited accessibility. There was some possible bias as the samples were predominantly selective and relied on participants' subjective experiences and evaluations. These data are preliminary and exploratory and require further replication and investigation. Another limitation is the possibility of the researcher influencing the interviews and data collection due to their own preconceived ideas on the benefits of surfing.

## 4. Conclusion

Despite its limitations, this research sheds light on the perspectives and experiences of Hong Kong surfers that may

assist in understanding the importance of surfing in terms of psychosocial wellbeing and environment protection. Overall, the findings suggest that surfing has a positive effect on psychosocial wellbeing and environmental awareness. Hence, surfers are perplexed at the rationale behind the ban on surfing, particularly as the sport is now actively promoted in China since its inclusion in the Olympics. It is hoped that this research will provide sufficient evidence to policy makers as a starting point to initiate conversations with all stakeholders regarding safely sharing the waters of HK.

## Abbreviations

ISA	International Surfing Association
SDT	Self- Determination Theory
SOC	Sense of Coherence
EDP	Ecological Dynamics Perspective
HK	Hong Kong
ASD	Autism Spectrum Disorder
BWB	Big Wave Bay
UK	United Kingdom
LCSD	Leisure and Cultural Services Department

## Author Contributions

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## Conflicts of Interest

The author declares no conflicts of interest.

## References

- [1] Manero, A. (2023). A case for protecting the value of 'surfing ecosystems'. (2023) *npj Ocean Sustain* 2, 6. <https://doi.org/10.1038/s44183-023-00014-w>
- [2] Lazarow, N. (2007). The value of coastal recreational resources: a case study approach to examine the value of recreational surfing to specific locales. *Journal of Coastal Research*, 12–20. <http://www.jstor.org/stable/26481547>
- [3] Wilson, (2022), Surf is Taking Over: Inland and Surfing Outlook for 2023 and Beyond. *Endless Surf*. Retrieved from: <https://endlessurf.com/2023/01/23/surf-is-taking-over-inland-surfing-industry-outlook-for-2023-and-beyond/#:~:text=In%20total%2C%20recent%20estimates%20by,%2D35%25%20of%20worldwide%20estimates>
- [4] Manero, A., Yusoff, A., Lane, M. & Verreydt (2024), A national assessment of the economic and wellbeing impacts of recreational surfing in Australia, *Marine Policy*. 167. 106267. <https://doi.org/10.1016/j.marpol.2024.106267>
- [5] Britton, E., & Foley, R. (2021). Sensing Water: Uncovering Health and Well-Being in the Sea and Surf. *Journal of Sport and Social Issues*, 45(1), 60–87. <https://doi.org/10.1177/0193723520928597>
- [6] Levin, B. J., & Taylor, J. (2011). Depression, anxiety, and coping in surfers. *Journal of Clinical Sport Psychology*, 5(2), 148–165. <https://doi.org/10.1123/jcsp.5.2.148>
- [7] Sentell, T., Thompson, M., Phillips, M., Schmid, S., Look, M., Saiki, K., Rodericks, R., Hoo, C. S., Weldon, R., & Pirkle, C. (2024). Surfing a culturally-relevant physical activity: a new wave for health promotion. *The European Journal of Public Health*, 34(Suppl 3), ckae144.1792. <https://doi.org/10.1093/eurpub/ckae144.1792>
- [8] Zhang, S., & Chen, Y. (2022). A Study on Embodied Experience of Surfing Tourism Based on Grounded Theory—Take China's Hainan Province as an Example. *Behavioral Sciences*, 12(11), 407. <https://doi.org/10.3390/bs12110407>
- [9] Fox, N., Marshall, J., & Dankel, D. J. (2021). Ocean Literacy and Surfing: Understanding How Interactions in Coastal Ecosystems Inform Blue Space User's Awareness of the Ocean. *International journal of environmental research and public health*, 18(11), 5819. <https://doi.org/10.3390/ijerph18115819>
- [10] Mach, L. & Ponting, J. (2021) Establishing a pre-COVID-19 baseline for surf tourism: Trip expenditure and attitudes, behaviors and willingness to pay for sustainability. (2021) *Ann. Tour. Res. Empir. Insights* 2, 100011.
- [11] Wheaton, B., Waiti, J. T. A., Olive, R. & Kearns, R.(2021) Coastal communities, leisure and wellbeing: advancing a trans-disciplinary agenda for understanding ocean-human relationships in Aotearoa New Zealand. *Int. J. Environ. Res. Public Health* 18, 450 (2021).
- [12] Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- [13] Antonovsky A. (1979). Health, stress and coping. San Francisco: Jossey-Bass.
- [14] Brymer, E., and Davids, K. (2013). Ecological dynamics as a theoretical framework for development of sustainable behaviours towards the environment. *Environ. Educ. Res.* 19, 45–63. <https://doi.org/10.1080/13504622.2012.677416>

- [15] Eriksson, M. (2017). The Sense of Coherence in the Salutogenic Model of Health. In: Mittelmarm, M., et al. The Handbook of Salutogenesis. Springer, Cham.  
[https://doi.org/10.1007/978-3-319-04600-6\\_11](https://doi.org/10.1007/978-3-319-04600-6_11)
- [16] Seifert, L., Hacques, G., & Komar, J. (2022). The Ecological Dynamics Framework: An Innovative Approach to Performance in Extreme Environments: A Narrative Review. *International journal of environmental research and public health*, 19(5), 2753. <https://doi.org/10.3390/ijerph19052753>
- [17] Lackey, N. Q., Tysor, D. A., McNay, G. D., Joyner, L., Baker, K. H., & Hodge, C. (2019). Mental health benefits of nature-based recreation: a systematic review. *Annals of Leisure Research*, 24(3), 379–393.  
<https://doi.org/10.1080/11745398.2019.1655459>
- [18] Elmahdy, Y., Orams, M. & Mykletun, R. (2024). Exploring the personal benefits of surfing: insights from cold-water surfers in Jæren, Norway. *Frontiers in Sustainable Tourism*.3.1286424.  
<https://doi.org/10.3389/frsut.2024.1286424>
- [19] Silva, S. F., & Ferreira, J. C. (2014). The social and economic value of waves: An analysis of Costa de Caparica, Portugal. *Ocean and Coastal Management*, 102(PA), 58–64.  
<https://doi.org/10.1016/j.ocecoaman.2014.09.012>
- [20] Usher, L. E. (2023). “Without [surfing], it’s kind of like Groundhog Day, but the ... Twilight Zone version”: a phenomenological study of surfers’ experiences of the COVID-19 pandemic. *Leisure/Loisir*, 48(3), 527–563.  
<https://doi.org/10.1080/14927713.2023.2224370>
- [21] Anderson, J. (2013). Cathedrals of the surf zone: regulating access to a space of spirituality. *Social & Cultural Geography*, 14(8), 954–972.  
<https://doi.org/10.1080/14649365.2013.845903>
- [22] Benninger, E., Curtis, C., Sarkisian, G. V., Rogers, C. M., Bender, K., & Comer, M. (2020). Surf Therapy: A Scoping Review of the Qualitative and Quantitative Research Evidence. *Global Journal of Community Psychology Practice*, 11(2), 1 – 26. Retrieved 4/12/2024 from  
<https://www.gjcpp.org/pdfs/BenningerEtAl-Final.pdf>
- [23] Carneiro, L., Clemente, F. M., Claudino, J. G., Ferreira, J., Ramirez-Campillo, R., & Afonso, J. (2024). Surf therapy for people with mental health disorders: a systematic review of randomized and non-randomized controlled trials. *BMC complementary medicine and therapies*, 24(1), 376.  
<https://doi.org/10.1186/s12906-024-04674-0>
- [24] Marshall, J., Kelly, P., & Niven, A. (2019). "When I Go There, I Feel Like I Can Be Myself." Exploring Programme Theory within the Wave Project Surf Therapy Intervention. *International journal of environmental research and public health*, 16(12), 2159.  
<https://doi.org/10.3390/ijerph16122159>
- [25] Cavanaugh, L. K., & Rademacher, S. B. (2014). How a SURFing Social Skills Curriculum can Impact Children with Autism Spectrum Disorders. *Journal of the International Association of Special Education*, 15(1).
- [26] Beranbaum, S., Kouri, N. A., Van der Merwe, N., & D’Andrea, W. (2024). The Impact of Surf Therapy on Risk-Taking and Interpersonal Closeness Among Violence-Exposed Youth. *Global Journal of Community Psychology Practice*, 15(2).  
<https://doi.org/10.17161/>
- [27] Devine-Wright, H., & Godfrey, C. (2020). The Wave Project: Evidencing Surf Therapy for Young People in the UK. *Global Journal of Community Psychology Practice*, 11(2), 1 – 15. Retrieved Day/Month/Year, from <http://www.gjcpp.org/>
- [28] Hignett, A., White, M. P., Pahl, S., Jenkin, R., & Froy, M. L. (2018). Evaluation of a surfing programme designed to increase personal well-being and connectedness to the natural environment among ‘at risk’ young people. *Journal of Adventure Education and Outdoor Learning*, 18(1), 53-69.  
<https://doi.org/10.1080/14729679.2017.1326829>
- [29] Leonard, A., Tairi, T., & Blampied, N. M. (2022). Tai Wātea/Waves of freedom: An evaluation of a surf therapy programme for improving psychosocial functioning in young men at high risk of adverse life outcomes. *Journal of Adventure Education and Outdoor Learning*, 24(3), 488–508.  
<https://doi.org/10.1080/14729679.2022.2153370>
- [30] Moran, R., Sperandei, S., Peel, N., Gray, T., & Reis, A. C. (2024). The long-term effect of surf therapy on posttraumatic stress, depression, and anxiety symptomatology among current and former Australian Defence Force members - A nonrandomised controlled longitudinal study in a community setting. *Mental Health and Physical Activity*.  
<https://doi.org/10.1016/j.mhpa.2024.100629>
- [31] Clapham, E. D., Lamont, L. S., Shim, M., Lateef, S., & Armitano, C. N. (2020). Effectiveness of surf therapy for children with disabilities. *Disability and health journal*, 13(1), 100828. <https://doi.org/10.1016/j.dhjo.2019.100828>
- [32] Moreton, S. G., Brennan, M. K., Nicholls, V. I., Wolf, I. D., & Muir, D. L. (2021). Exploring potential mechanisms underpinning the therapeutic effects of surfing. *Journal of Adventure Education and Outdoor Learning*, 22(2), 117–134.  
<https://doi.org/10.1080/14729679.2021.1884104>
- [33] Godfrey C., Devine-Wright H., Taylor J. (2015). The positive impact of structure surfing courses on the wellbeing of vulnerable young people. *Community Practitioner*, 88(1), 26–29.  
<https://pubmed.ncbi.nlm.nih.gov/26357740/>
- [34] Beaumont, E., & Brown, D. (2018). It’s the sea and the beach more than anything for me: local surfer’s and the construction of community and communitas in a rural Cornish Seaside Village. *Journal of Rural Studies*. 59, 58-66.  
<https://doi.org/10.1016/j.jrurstud.2018.02.003>
- [35] Lemarié J. Organized Lifestyle Sports in Southern California: Social Facts, Collective Consciousness, and Solidarity Among University Surfers. (2023) *Int J Sociol Leis* 6, 87–110 (2023).  
<https://doi.org/10.1007/s41978-022-00125-7>
- [36] Langseth, T. (2011). Liquid ice surfers—the construction of surfer identities in Norway. *Journal of Adventure Education and Outdoor Learning*, 12(1), 3–23.  
<https://doi.org/10.1080/14729679.2011.599987>



- [37] Beaumont, E., & Brown, D. (2014). 'It's not something I'm proud of but it's ... just how I feel': local surfer perspectives of localism. *Leisure Studies*, 35(3), 278–295. <https://doi.org/10.1080/02614367.2014.962586>
- [38] Martin, S. A. (2022). From shades of grey to Web of Science: a systematic review of surf tourism research in international journals (2011–2020). *Journal of Sport & Tourism*, 26(2), 125–146. <https://doi.org/10.1080/14775085.2022.2037453>
- [39] Kim, H., & Kwon, S. -Y. (2020). Working for a Sustainable Surfing Community: Becoming a Local Surfer at a New Home Destination. *Sustainability*, 12(17), 6865. <https://doi.org/10.3390/su12176865>
- [40] Booth, D. G. (2004). Surfing : From one (cultural) extreme to another. Retrieved on 20<sup>th</sup> December 2024 from <https://www.taylorfrancis.com/chapters/edit/10.4324/9780203646069-10/surfing-douglas-booth>
- [41] Usher L. E. & Kerstetter D. (2015). Re-defining localism: An ethnography of human territoriality in the surf. *International Journal of Tourism Anthropology*, 4, 286–302. <https://doi.org/10.1504/IJTA.2015.071930>
- [42] Stranger, M. (2010). Surface and substructure: beneath surfing's commodified surface. *Sport in Society*, 13(7–8), 1117–1134. <https://doi.org/10.1080/17430431003780054>
- [43] Lu, Y., Chen, Y., & Su, C. (2024). Understanding the authenticity of surf tourism: evidence from Chinese tourists. *Sport in Society*, 27(9), 1462–1486. <https://doi.org/10.1080/17430437.2024.2304228>
- [44] Brymer, E., & Gray, T. (2009). Dancing with nature: rhythm and harmony in extreme sport participation. *Journal of Adventure Education and Outdoor Learning*, 9(2), 135–149. <https://doi.org/10.1080/14729670903116912>
- [45] Amrhein, M., Barkhoff, H., & Heiby, E. M. (2016). Spirituality, depression, and anxiety among ocean surfers. *Journal of Clinical Sport Psychology*, 10(2), 155–171. <https://doi.org/10.1123/jcsp.2015-0016>
- [46] Rocher, M., Silva, B., Cruz, G., Bentes, R., Lloret, J., & Inglés, E. (2020). Benefits of Outdoor Sports in Blue Spaces. The Case of School Nautical Activities in Viana do Castelo. *International journal of environmental research and public health*, 17(22), 8470. <https://doi.org/10.3390/ijerph17228470>
- [47] Román, C., Borja, A., Uyarra, M. C., & Pouso, S. (2022). Surfing the waves: Environmental and socio-economic aspects of surf tourism and recreation. *The Science of the total environment*, 826, 154122. <https://doi.org/10.1016/j.scitotenv.2022.154122>
- [48] Brewin, R. J., de Mora, L., Jackson, T., Brewin, T. G., & Shutler, J. (2015). On the Potential of Surfers to Monitor Environmental Indicators in the Coastal Zone. *PloS one*, 10(7), e0127706. <https://doi.org/10.1371/journal.pone.0127706>
- [49] Reineman, D. (2016). The utility of surfers' wave knowledge for coastal management, *Mar. Policy* 67, 139–147, <https://doi.org/10.1016/j.marpol.2016.01.02>
- [50] Reineman, D., Thomas, L. & Caldwell, M (2017) Using local knowledge to project sea level rise impacts on wave resources in California *Ocean Coast. Manag.* 138. 181-191.
- [51] Falaix, L., Lemarié J., Lafargue, J. (2021) *Activist Surfing-based Groups in the Tourism Transition: Localism and Universalism in the French Basque Country*. *Géocarrefour - Revue de géographie de Lyon*, 95(2). <https://doi.org/10.4000/geocarrefour.18491>
- [52] Olive, R., & Wheaton, B. (2021). Understanding Blue Spaces: Sport, Bodies, Wellbeing, and the Sea. *Journal of Sport and Social Issues*, 45(1), 3-19. <https://doi.org/10.1177/0193723520950549>
- [53] Holland-Smith, D., Love, A. & Lorimer, R. (2013), British surfers and their attitudes and values toward the environment. *Ecopsychology*, 5, 103-109.
- [54] Surfers against Sewage. (1996). *Environmental Health Perspectives*, 104(7), 684–685. <https://doi.org/10.2307/3433205>
- [55] Surfrider Foundation Europe (2021) Annual report 2021. Retrieved from: [https://www.surfrider.eu/wpcontent/uploads/2022/05/annual\\_report\\_2021\\_en.pdf](https://www.surfrider.eu/wpcontent/uploads/2022/05/annual_report_2021_en.pdf)
- [56] Machado, V., Carrasco, P., Contreiras, J. P., Duarte, A. P., & Gouveia, D. (2017). Governing Locally for Sustainability: Public and Private Organizations' Perspective in Surf Tourism at Aljezur, Costa Vicentina, Portugal. *Tourism Planning & Development*, 15(6), 692–704. <https://doi.org/10.1080/21568316.2017.1415958>
- [57] Waiti, A. J. T., & Awatere, S. (2019). Kaihekengaru: Māori Surfers' and a Sense of Place. *Journal of Coastal Research*, 87, 35 - 43. <https://doi.org/10.2112/SI87-004.1>
- [58] Hong Kong Government (2019) Bathing Beaches Regulation. Retrieved from: <https://www.elegislation.gov.hk/hk/cap132E>
- [59] Hamer, L. (2024). Surfing ban makes Olympics a pipe dream for Hongkonger, while China teen eyes debut. *South China Morning Post*. 25<sup>th</sup> July 2024. <https://www.scmp.com/sport/paris-olympics-2024/aquatics/article/3271745/surfing-ban-makes-olympics-pipe-dream-hongkongers-while-china-teen-eyes-debut>
- [60] Whitehead, K. (2021). Hong Kong's first Olympic gold medalist, Lee Lai-shan, on her biggest challenge – raising a family – and giving up windsurfing. *South China Morning Post (SCMP)* retrieved from <https://www.scmp.com/magazines/post-magazine/article/3137765/hong-kongs-only-olympic-gold-medallist-lee-lai-shan-her>
- [61] Wengel, Y. Han, L., & Hu, Y. (2024). Surfing in Hainan Island: An Emerging Surfing Tourism Destination in China. *Tourism Cases*. CABI. <https://doi.org/10.1079/tourism.2024.0014>
- [62] Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp0630a>



- [63] Wheaton, B. (2019). Staying 'stoked': Surfing, ageing and post-youth identities. *International Review for the Sociology of Sport*, 54(4), 387-409.
- [64] Csikszentmihalyi M. (1975). *Beyond Boredom and Anxiety*. San Francisco, CA: Jossey-Bass Publishers.
- [65] McKenzie, R. J., Chambers, T. P., Nicholson-Perry, K., Pilgrim, J., & Ward, P. B. (2021). "Feels Good to Get Wet": The Unique Affordances of Surf Therapy Among Australian Youth. *Frontiers in psychology*, 12, 721238. <https://doi.org/10.3389/fpsyg.2021.721238>
- [66] Pittsinger, R., Kress, J., & Crussemeyer, J. (2017). The Effect of a Single Bout of Surfing on Exercise-Induced Affect. *International journal of exercise science*, 10(7), 989-999. <https://doi.org/10.70252/XBNU4472>
- [67] Britton, E.; Kindermann, G.; Domegan, C.; Carlin, C. (2020) Blue care: A systematic review of blue space interventions for health and wellbeing. *Health Promot. Int.* 35, 50-69.
- [68] Gibbs, K., Wilkie, L., Jarman, J., Barker-Smith, A., Kemp, A. H., & Fisher, Z. (2022). Riding the wave into wellbeing: A qualitative evaluation of surf therapy for individuals living with acquired brain injury. *PloS one*, 17(4), e0266388. <https://doi.org/10.1371/journal.pone.0266388>
- [69] White, M. P., Elliott, L. R., Gascon, M., Roberts, B., & Fleming, L. E. (2020). Blue space, health and well-being: A narrative overview and synthesis of potential benefits. *Environmental research*, 191, 110169. <https://doi.org/10.1016/j.envres.2020.110169>
- [70] Fuchs, O., & Schomer, H. H. (2007). Beyond Sport: A Thematic Analysis of surfing. *South African Journal for Research in Sport Physical Education and Recreation*, 29, 11-27. [10.4314/sajrs.v29i2.25964](https://doi.org/10.4314/sajrs.v29i2.25964)
- [71] Podavkova, T.; Dolejs, M. (2022) Surf Therapy—Qualitative Analysis: Organization and Structure of Surf Programs and Requirements, Demands and Expectations of Personal Staff. *Int. J. Environ. Res. Public Health*. 19, 2299. <https://doi.org/10.3390/ijerph19042299>
- [72] Peck, B. D., & Lagopoulos, J. (2019) How Surfing Could be a Treatment for Mental Illness. *Front. Young Minds*. 7: 70. <https://doi.org/10.3389/frym.2019.00070>
- [73] Britton E. (2019). Dúchas: Being and belonging on the borderlands of surfing, senses and self. In Foley R., Kearns R., Kistemann T., Wheeler B. (Eds.), *Blue space, health and wellbeing: Hydrophilia unbounded* (pp. 95-116). Routledge.
- [74] Olive, L., Dober, M., Mazza, C., Turner, A., Mohebbi, M., Berk, M. & Telford, R. (2023). Surf therapy for improving child and adolescent mental health: A pilot randomised control trial. *Psychology of Sport and Exercise*. 65. 102349. 1-8. <https://doi.org/10.1016/j.psychsport.2022.102349>
- [75] Sproule, J., Martindale, R., Wang, J., Allison, P., Nash, C., & Gray, S. (2013). Investigating the experience of outdoor and adventurous project work in an educational setting using a self-determination framework. *European Physical Education Review*, 19(3), 315-328.
- [76] Poon, K.-T., Teng, F., Wong, W.-Y., & Chen, Z. (2016). When nature heals: Nature exposure moderates the relationship between ostracism and aggression. *Journal of Environmental Psychology*, 48, 159-168. <https://doi.org/10.1016/j.jenvp.2016.10.002>
- [77] Marshall, J., Ferrier, B., Martindale, R., & Ward, P. B. (2023). A grounded theory exploration of programme theory within Waves of Wellness surf therapy intervention. *Psychology & Health*, 1-23. <https://doi.org/10.1080/08870446.2023.2214590>
- [78] Howe, K. (9<sup>th</sup> December, 2000), *Surf City, SAR*, South China Morning Post (SCMP) <https://www.scmp.com/article/333546/surf-city-sar>
- [79] Giordano, K. (2024). Deep Dive: Hong Kong's crackdown on surfing ban leads to confusion *South China Morning Post*. 11th November 2024 <https://www.scmp.com/yp/discover/article/3285369/deep-dive-hong-kongs-crackdown-surfing-ban-leads-confusion>
- [80] Centre for Health Protection (CHP, 2019). Hong Kong Drowning Report. Retrieved from [https://www.chp.gov.hk/files/pdf/hk\\_drowning\\_report\\_en.pdf](https://www.chp.gov.hk/files/pdf/hk_drowning_report_en.pdf)
- [81] Caprara, P (2008) "Surf's Up: The Implications of Tort Liability in the Unregulated Sport of Surfing," *California Western Law Review*. 44(2) <https://scholarlycommons.law.cwsl.edu/cwlr/vol44/iss2/6>
- [82] Anderson J (2014) Exploring the space between words and meaning: Understanding the relational sensibility of surf spaces. *Emotion Space and Society* 10: 27-34. <https://doi.org/10.1016/j.emospa.2012.11.002>
- [83] Usher, L. E., Goff, J., & Gómez, E. (2015). Exploring surfers' perceptions of municipal regulations using grounded theory. *Annals of Leisure Research*, 19(1), 98-116. <https://doi.org/10.1080/11745398.2015.1066260>