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'When I enter the ocean, I forget about all my problems': improving young people's well-being and education through surf therapy

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ABSTRACT

This paper analyses the '*Onda Social*' project implemented in the city of Matosinhos, located in the municipality of Porto, Portugal. '*Onda Social*' (which translates into Social Wave) is a surf therapy project that aims to stimulate the academic, social, and emotional skills of young people at risk through the practice of surfing. The project covered 363 children and young people aged 7–14, organised in groups with an average of 15 young people per group over three years. Each group of participants attended weekly 2:30-hour sessions throughout a school semester-long intervention cycle. Psychologists and surf coaches led the sessions. A team of researchers monitored and followed up on the implementation of the project whilst gathering qualitative data on the intervention developed by the project team. The aim was to understand perceptions of the project's impact on its participants' mental health and well-being and their educational outcomes. The findings indicate that this surf therapy intervention was perceived as positive for participants' social and personal development. Well-being promotion and the development of relevant competences also led to increased motivation and school engagement of children and young people at risk.

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Surf therapy; intervention; positive development; well-being; competences

Introduction

Mental health issues are becoming a major public health concern in children and adolescents. According to the World Health Organization (WHO, 2022), 14% of the world's adolescents live with a mental health issue. Recent research has indicated that the COVID-19 pandemic has further exacerbated depression and anxiety in young people (Nearchou et al., 2020). Moreover, COVID-19 has further accentuated educational disadvantage, affecting in a more prominent way children and young people who were already marginalised (Koehler et al., 2022, Nada et al., 2022).

Research shows that being physically active and practising sports has many benefits for both physical and mental health. For instance, physical activity resulted in improved executive functions, enhanced mood states, and decreased stress levels (Basso & Suzuki, 2017). Ruegsegger and Booth (2018) found positive effects of exercise on mental health, social skills and sleep, and stated that

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'exercise is medicine' given its whole-body, health-promoting nature and potential for preventing and treating various chronic conditions.

Physical activity interventions that use surfing as a vehicle to achieve positive change (including enhanced mental health) have been gathered under the term 'surf therapy' (International Surf Therapy Organization, n.d.), as it incorporates the physical activity of surfing into the healing process. A scoping review of existing surf therapy interventions found many benefits for children and youth needing social and emotional support (Benninger et al., 2020). In the same study, surf therapy was shown to increase self-concept, emotional regulation, social competences, and improve school (re)engagement. Other positive outcomes include improved psycho-social well-being, decreased isolation, and symptom reduction (Marshall et al., 2020).

However, previous research also indicates that the benefits of surf therapy programmes are not unequivocal and should not be taken for granted. According to Benninger et al. (2020), many studies on surf therapy involve small sample sizes and lack control groups, making it difficult to draw definitive conclusions about its effectiveness. Moreover, Brennan et al. (2024) note that surf therapy programmes may not always rely on evidence-based practices, which raises further questions regarding their effectiveness.

The current paper will contribute to the current discussion on the benefits of surf therapy for young people at risk by analysing the '*Onda Social*' project, a surf therapy intervention implemented in Northern Portugal with school-aged children ranging from 7 to 14 years old. Whilst the current study has its own methodological limitations and is not in a position to definitely answer current pending questions about the effectiveness of surf-therapy interventions, it seeks to contribute to the still limited wealth of research available in this area. The distinctive elements of this study are connected to its location, Portugal, adding to the research already available mainly in countries like the UK and Australia, as well as to its methodological design, for being a qualitative study relying on the analysis of a diverse set of materials.

Against this background, and taking the '*Onda Social*' project as the main research context, the current paper has a twofold objective:

(1) Understand if surfing can enhance the well-being of the children and youth participating in the '*Onda Social*' project
(2) Understand if this surf therapy programme has the potential to improve educational outcomes of children and young people at risk

Theoretical framework

Evidence on the benefits of blue exercise and surfing

Research on outdoor sports presents several potentialities regarding sports practices in nature. Practitioners can connect with nature during sports in contexts like sea, river, or forest; connect with themselves by challenging their strengths, capabilities and potential; and connect with other practitioners during physical activity (Eigenschenk et al., 2019). The benefits arising from these connections are significant and favour 'intra- and interpersonal development' (p. 2), as well as adopting a more active, healthy and environmentally conscious lifestyle (Cottrell & Cottrell, 2020).

Those who practice nature sports tend to present cognitive, physical, emotional, social and personal benefits (Cottrell & Cottrell, 2020). It is worth noting that practising sports in nature is demanding, requiring strength, agility, coordination and physical resistance, which directly impact the prevention of physical illnesses. The fact that physical activity stimulates the release of endorphins and also strongly impacts the well-being of its practitioners, improving their self-concept and self-esteem and preventing mental illness (Eigenschenk et al., 2019; Rocher et al., 2020). Some studies also highlight the potential of sports in

nature for promoting inclusion, active citizenship and greater environmental awareness, which, in turn, can reduce crime and antisocial behaviour (Eigenschenk et al., 2019; Rocher et al., 2020).

Existing literature provides similar findings for blue exercise and surfing. For instance, Rocher et al. (2020) found evidence of improved physical and mental health among children and young engaged in outdoor sports in blue spaces and improved social skills and environmental awareness (R. Olive, 2023). In a study specifically focused on the impact of blue exercise on participant well-being, Thompson and Wilkie (2021) found evidence of numerous improvements specifically connected to the benefits of blue exercise and the restorative nature of water environments. When it comes to the practice of surfing, more specifically, Silva et al. (2022) analysed, through a mixed method approach, the participation of pupils in surf activities as part of the physical education curriculum and found evidence of significant improvement in the participants' quality of life. Several studies in the area describe positive changes in practitioners related to their physical, psychological, mental and social well-being, for example, in terms of their self-regulation, their resilience, their school integration and their confidence during learning processes (Marshall et al., 2019; Rocher et al., 2020).

Well-being and mental health

Well-being is one of the dimensions of mental health, defined as the absence of mental illness combined with a feeling of well-being. However, assessing one's quality of life underlies subjective well-being, which is linked to happiness. It, therefore, involves positive emotions and a life purpose, i.e. the positive functioning in life as a person and as a citizen (Keyes, 2014). In this sense, Lamers et al. (2011) refer that mental health involves three intertwined dimensions. First, emotional well-being refers to the ability to manage emotions through self-knowledge, favouring the construction of positive relationships, positive emotions, and high self-esteem (Keyes, 2014). Second, psychological well-being is allied to self-esteem provided by individual functioning (Lamers et al., 2011). It involves self-acceptance (maintaining positive attitudes towards oneself), environmental mastery (ability to choose or create environments appropriate to one's condition), positive relationships with others (warm and trusting interpersonal relationships), personal growth (continuously developing one's potential), autonomy (autonomous functioning and resistance to enculturation) and purpose in life (having goals, intentions, and a sense of direction; Ryff & Keyes, 1995). Third, social well-being, defined by Keyes (1998) as 'the assessment of the circumstances and functioning of a person in society' (p. 122), is associated with social contribution as part of the community. It involves social actualisation and social coherence, as having a positive functioning in society becomes an integral part of one's well-being (Keyes, 2014).

Studies with young people (Easkey & Ronan, 2021) highlight the importance of physical activity in contact with nature as one of the factors that can enhance well-being and mental health. They refer to the importance that social and even environmental conditions have in improving mental and physical health throughout life. Therefore, they defend the importance of an active and healthy life trajectory connected with peers, society, and nature.

In analysing the emotional dimensions of well-being within surf therapy contexts, we draw upon Wetherell's (2012) conceptualisation of affect and emotion as meaning-making processes that are simultaneously psychological and social. Wetherell's 'affective practice' concept offers valuable theoretical grounding for understanding how the embodied emotional experiences of surfing and the subsequent 'enskilment' (Prins & Wattchow, 2023) and development of practical knowledge of surf environments, may later transfer to other dimensions of the participants' lives. This perspective illuminates the reciprocal relationship between emotional well-being and educational engagement, as affective practices developed in surf therapy contexts may become relevant also in academic settings, as further explained below.

Educational benefits

Numerous studies indicate a positive relationship between sports and learning. For instance, learning was facilitated by basic cognitive abilities such as attention and memory, which are enhanced by physical exercise and increased cardiovascular fitness (Kohl et al., 2013). A systematic review (Donnelly et al., 2016) found positive associations among physical activity, cognition, and academic achievement. The authors of the same review concluded that physical activity had a favourable effect on cognition, as well as brain structure and function. Still, more research is needed to determine the underlying mechanisms. Changes in children's brain function and cognition due to physical activity (such as attention, information processing, executive function, and memory) have been linked to improved academic achievement (De Greeff et al., 2018).

Surf therapy programmes: current evidence and ongoing debates

Surf therapy is an example of an educational intervention involving blue exercise in a physically challenging natural context. Surf therapy was defined in 2019 by the International Surf Therapy Organization (n.d.) as a method of intervention that combines surf instruction/surfing and structured individual and/or group activities to promote psychological, physical and psychosocial well-being.

Projects based on surf therapy (e.g. The Wave project, UK) are associated with positive effects on various key aspects of well-being in children and young people, such as positive functioning, competence, calmness and having fun, which were measured by a modified version of the Stirling children's well-being scale (Devine-Wright & Godfrey, 2018). In the Waves of Freedom project, in New Zealand, 25 of the 27 young men at risk of adverse life outcomes who participated in the programme demonstrated reliable improvement in psychosocial functioning (Leonard et al., 2022). Similarly, the analysis of the Surf-Salva Camp project, in Portugal, revealed that participants have improved in self-knowledge, perseverance, problem-solving, time management, teamwork, interpersonal interaction and emotional regulation (Matos et al., 2017). Evaluators of the same project concluded that 'using surf as a tool for psycho-therapeutic intervention seems beneficial for a healthy lifestyle, well-being, and personal and social competences of young people in contexts of psycho-social vulnerability' (Matos et al., 2016, p. 445).

Surf therapy demonstrates, therefore, significant potential to avoid deficit views (Nada et al., 2020) of young people and different marginalised groups, enhancing their positive development, well-being, and academic achievement. At the same time, the causal processes through which surfing can actually achieve the benefits listed above remain insufficiently understood (Moreton et al., 2022). In fact, it is important to highlight that for surf therapy programmes to be successful, adequate support to its participants is fundamental (Drake et al., 2021). Moreover, it is not enough to provide 'a rush of adrenalin' but an environment where participants 'can safely learn new and interesting behaviour or skill, with the help of motivating and caring group members and a well-trained facilitator' (Gomes et al., 2020, p. 15).

Despite their potential, many surf therapy programmes have encountered limitations and challenges that impact their effectiveness. One major issue found in different studies (e.g. Benninger et al., 2020; Brennan et al., 2024) is inadequate funding, which often hampers the development and implementation of evidence-based practices. In addition, such programmes also struggle with coordination and organisation, staff retention, and adequate training, which can undermine safety and community engagement (Brennan et al., 2024). Furthermore, evaluating the actual impact of surf therapy proves difficult due to the lack of well-established and validated assessment tools tailored for specific sub-populations (Walter et al., 2020).

Even more fundamental critiques emerge in the field of sport-based interventions. As noted by Coakley (2011), 'sport evangelist' perspectives mark this field of research, uncritically assuming positive developmental outcomes to sport-based interventions. Regarding surf

interventions in particular, Carneiro et al. (2024, p. 3) observe that 'the biggest barrier to understanding the efficacy of surf therapy is the lack of controlled evaluations (RCTs)'. Enthusiasm for surf therapy interventions is, however, no reason to brush aside empirical validation. While the study presented here is not a randomised control trial, the methodological design relies, as further explained below, on a diverse set of data collection methods, which allows for an understanding of the surf programme's impact through the voices of different actors involved in the lives and educational trajectories of the programme's main beneficiaries.

Methodology

The surf therapy project

To achieve the research main objectives, understanding the potential of surfing for enhancing the well-being and educational outcomes of children and young people, we conducted a qualitative monitoring and analysis of the '*Onda Social*' project implemented in the northern region of Portugal by the Onda Pura Surf Centre. Wide accessibility to natural surf environments allows for the development of surf therapy-based programmes in Portugal, leveraging the healing benefits of nature alongside physical activity. However, surfing remains an expensive activity, limiting access for many children. Projects like '*Onda Social*' are crucial, since they provide this opportunity of experiencing a therapeutic model combined with the primary practice of surfing to those who might otherwise be unable to participate.

Based on surf therapy the '*Onda Social*' project aims to harness the practice of surfing to foster personal and social development, psychological well-being, emotional growth, social competence, and academic skills. Over 3 years (from June 2020 to July 2023), the project was funded by Portugal Social Innovation. The implementation of this project directly involved the directors of the surf school and a technical team of three surf coaches and three psychologists (in this article, we will refer to this team as the 'project team').

The project involved 363 students from 10 schools in the Municipality of Matosinhos, aged between 7 and 14 years old. The participants who integrated the project benefited from the intervention during a full semester. For every new semester, new participants were selected. The selection was made according to the following criteria: i) students who live on the poverty line, have no parents or live institutionalised; ii) students whose families have various problems that put them at risk of social exclusion (e.g. drug-addicted parents); iii) students with learning difficulties; iv) students with behavioural issues or v) students with school absenteeism issues and consequent risk of retention. The referral process of these students was carried out by the school (school psychologists, school directors and class directors) in collaboration with social workers and psychologists from the Municipality, a co-founder of the project. These criteria were used only to select the participants of the surf therapy programme. This means that during the implementation of the project, students were not grouped according to any of these criteria, but in accordance with practical considerations, such as transportation and school schedules. Participants were grouped based on schools and educational levels in Portugal (1st cycle of basic education, ages 7–10; 2nd cycle of basic education, ages 10–12; and 3rd cycle of basic education, ages 12–14).

Table 1 presents the distribution of students per semester, schools and groups, and the number of surf therapy sessions conducted over the three years of the project implementation. Each group had a weekly intervention lasting approximately 2 hours and 30 minutes led by surf coaches and psychologists, who guided the surf therapy sessions.

Regarding organisation and planning, the '*Onda Social*' project adopted an integrated approach that combined surf learning with a therapeutic intervention programme targeting the personal and social skills of each participant. Each group had a specific plan based on the school's priorities, focusing on concentration, behaviour problems, resistance to frustration, and time management.

Table 1. Distribution of participants per school year, semester, schools, working groups, and number of surf therapy sessions.

Year	Semester	School/Group	Number of students	Surf therapy sessions
2020/2021	Winter	School 1, G1	14	25
		School 2, G2	16	21
		School 2, G3	14	20
		School 2, G4	15	20
	Summer	School 3, G1	14	10
		School 3, G2	14	10
		School 2, G5	16	10
		School 2, G6	16	10
Total			**119**	**126**
2021/2022	Winter	School 4, G1	12	16
		School 4, G2	16	15
		School 5, G1	16	18
		School 4, G3	15	17
	Summer	School 4, G4	16	14
		School 5, G2	13	15
		School 5, G3	18	15
		School 4, G5	16	15
Total			**122**	**125**
2022/2023	Winter	School 6, G1	12	18
		School 7, G1	17	19
		School 6, G2	13	18
		School 7, G2	15	20
	Summer	School 8, G1	17	10
		School 9, G1	12	4
		School 6, G3	16	11
		School 10, G1	12	13
Total			**122**	**133**

Each surf therapy session consisted of three moments: i) on land – a welcome session with a brief conversation and group dynamics proposed by the psychologists; ii) on water – a surf lesson; iii) on land – a moment of finalisation with reflection on the achievements and establishment of commitments for the following week. In each session, the psychologists and the surf coaches used the Padlet platform to register and monitor the process.

The research

Throughout the development of the '*Onda Social*' project, a team of researchers from the University of Porto, representing the Observatory of Sport, Education, and Communities, was invited to monitor and follow on each stage of the project. This close monitoring conducted by researchers external to the '*Onda Social*' project team (hereafter designated the 'research team') allowed for continuous critical reflection on the project's intervention, its strengths and weaknesses.

Throughout the research, the research team intentionally used various qualitative data collection methods: logbooks (through the Padlet digital platform); participant observation of the project activities (through fieldnotes), as well as semi-structured interviews with the children and young people participating in the surf therapy programme, schoolteachers and school psychologists, to understand how the surf therapy intervention was perceived by its participants as well as by different school actors. Adopting these different data collection methods allowed for diversity of voices and perspectives regarding this surf therapy programme.

The logbooks produced by the project team were used as a research instrument and contained reflections, activities, dynamics and interactions arising from the surf therapy sessions. Qualitative interviews allowed the research team to explore participants' views, experiences, and attitudes towards the programme. Finally, participant observation aimed to explore and experience the

reality encountered by the participants themselves (Cohen et al., 2017), helping the research team to get immersed in the project's functioning and dynamics.

Data collection and analysis was conducted by the research team regularly and systematically throughout the project, with the aim of fostering joint reflections with the project team and ensuring the appropriateness of the intervention. Over three years, data collection focused on different aspects:

- in the first year, it centred on gathering perceptions on the project's benefits and constraints from children and young people participating in the project and school interlocutors (teachers and psychologists). During this phase, interviews were conducted with 16 children and young people (two interviewees were chosen randomly from each intervention group over two semesters). Being a qualitative study, we did not follow the same rationales for sampling that a quantitative research would require. Our focus was to obtain qualitative and detailed accounts from the direct beneficiaries of the programme. The number of participants (16) was deemed sufficient for this purpose, considering our intention of further triangulating these accounts with other sources of qualitative data. In fact, after conducting all interviews and conducting a preliminary coding exercise, we understood that a point of data saturation (Guest et al., 2006) had been reached. In other words, the collected accounts were sufficient to inform the current analysis and hence conducting more interviews would most likely not change our analysis, in terms of its key dimensions, categories and indicators (for more details, please see Table 2 below). The interview guide contained questions related to the participants' expectations regarding the '*Onda Social*' project, to their strengths and weaknesses when it comes to their surfing and school performance, and their perceptions about the impact of their participation in the surf therapy programme and their school performance. Additionally, interviews were conducted with two schoolteachers and a school psychologist. These interviews were focused on these professionals' expectations regarding the programme and their perceptions of the impact of the project on children's well-being and school performance.
- in the second year, data collection focused on the project implementation process and the perceptions of the project team, including three surf coaches and three psychologists. This data was collected throughout each semester through weekly recordings on Padlet at the end of each surf therapy session. The Padlets recorded experiences, emotions, achievements, challenges, and limitations encountered by the project team and young participants; During this year, the research team analysed eight Padlets.

Table 2. Analytical framework.

Dimensions	Categories	Indicators
Personal and social development (based on Coakley, 2011; Lerner et al., 2005)	Positive Development	Competence, confidence, connection, character (self-control, frustration management, resilience)
	Social responsibility (school, team, project)	Commitment, teamwork, mutual help, collaboration.
Well-being (Keyes, 1998, 2014)	Psychological well being	Self-acceptance, environmental mastery, positive relationship with others, personal growth, autonomy, purpose in life
	Emotional well being	Positive emotions or affects, negative emotions or affects, life satisfaction
	Social well being	Social integration, social acceptance, social contribution, social updating, social coherence
Academic competences (Ikesako & Miyamoto, 2015)	Cognitive competences	Memory, concentration, time management
	Emotional competences	Empathy, identifying and understanding thoughts and feelings of others.
	Social competences	Interpersonal relationships, commitment, accountability.

- in the third year, the researchers attended project activities and conducted participant observation summarised in field notes, containing information about how the sessions were organised, the relationship between the project team and the young people, the relationship between peers and how the planned intervention was being implemented. In total, field notes from the research team's participation in four surf therapy sessions were analysed.

In the analysis presented in this paper, all these data collection instruments were considered. The use of diverse qualitative research methods was based on the intention to understand this surf therapy intervention in its complexity. Qualitative research allows for closer interaction between researchers and participants, valuing the unique standpoint of the interlocutors participating in the research (Cohen et al., 2017, Nada et al., 2023). Moreover, digital platforms like Padlet facilitated continuous and real-time data gathering, reflecting the dynamic and evolving nature of the research context. The data analysis method employed on all the data resulting from the aforementioned instruments was qualitative content analysis (Cho & Lee, 2014). NVivo was used as a support software in the analytical process.

The data analysis was grounded in a three-dimensional framework: personal and social development, drawing on the theoretical perspectives of Lerner et al. (2005) and Coakley (2011); well-being, operationalised through Ryff and Keyes (1995) and Keyes (2014); and academic competences, which were addressed based on the OECD framework of cognitive, social, and emotional skills, as proposed by Ikesako and Miyamoto (2015). Starting from these three dimensions, our content analysis implied the identification of subsequent categories and indicators, as detailed in Table 2.

Given that the research team was working closely with the project team, this position of familiarity may have influenced the researchers' understanding of the project. On the one hand, knowing the project team well and being familiar with its implementation plan, provided the research team with a better understanding of the collected data, capturing dimensions and nuances that an external team of researchers might have otherwise missed. On the other hand, this proximity to the project increased the risk of bias, inherent to such a qualitative endeavour, which was rooted in the enthusiasm that the research team has slowly started to develop for the project and its outcomes. This bias was mitigated by employing a critical lens when analysing the data, as visible in the Findings and Discussion section below.

Since '*Onda Social*' is a funded project, monitoring and analysis are core parts of its implementation. Measures to ensure ethical and data protection standards were implemented by the project team, who also collected informed consent from all participants or legal guardians. Agreeing to participate in this surf therapy programme hence implied agreement to participate in all corresponding research activities. Even though the initial consent explicitly foresaw participation in all related research components, working with vulnerable populations requires additional attention, hence the research team sought to build a relationship of trust between the project team, the children and young people, and their legal guardians. This means that the research team constituted a consistent presence during different intervention moments, becoming a 'familiar face' and engaging in regular communication with the project team and its participants. In several moments, the research team reminded the participants about the objectives of the research, asking, for example, before observing a particular surf-therapy session, if both the project team and the children agreed that the researchers would attend that session. Moreover, when certain children from an intervention group who were given the opportunity to participate in an interview did not express interest or appeared uncomfortable to participate, the research team selected another participant. Moreover, the research team continuously negotiated the consent provided by the project team, highlighting, for instance, the use by the research team of the data collected through Padlet, as well as the implications of observing surf-therapy sessions, highlighting that these were not meant to evaluate the work of surf coaches and psychologists, nor to alter the planned dynamic of the intervention. Additionally, the scientific council of the Observatory of Sport, Education, and

Communities from the University of Porto recommended that all participants should be aware of their right to withdraw or discontinue their involvement in the research at any moment, and hence the research team clarified this aspect throughout the data collection process.

Findings and discussion

Personal and social development

The conceptualisation and development of the '*Onda Social*' project and actions are based on a Positive Youth Development perspective, according to which children and young people are agents of their development equipped with competences that can be leveraged through sport (Coakley, 2011; Lerner et al., 2005). Some examples are self-confidence and self-control, but also personal and social responsibility, resistance to frustration, commitment, and teamwork.

The content analysis of the multiple materials collected reveals that, after the school semester-long cycle of surf therapy, the participants showed signs of enhanced social and personal skills. For many interviewees, the project exceeded their expectations. If initially, they reported fears related to the novelty of surfing, thanks to the colleagues and the 'new teachers' (as they refer to the surf coaches), they were able to overcome their fears:

> I was worried and concerned about drowning. [Now] I'm not so afraid anymore. [In the surf classes] I like everything. [What I liked the most was] standing up on the surfboard. (Participant 1)

This is not an isolated account among the interviewees. In fact, most of the participants reported similar feelings and an increase in their self-confidence, the ability to overcome difficulties and a greater individual and collective responsibility. A Padlet entry of a surf coach describes an activity where participants were working on confidence skills, revealing the changes that he perceived in the participants thanks to this activity:

> They were divided into pairs. One of them, with their eyes closed, had to complete a route with the help of the other, without touching, just listening to the directions to overcome the obstacles. Then, they switched roles. At first, they didn't like us pairing them up, so they ended up choosing the pairs. In the end, they enjoyed the activity very much, although they were anxious to go to the sea. The activity continued there, they went with their pair on the surfboard, and, in collaborative work, each pair had to be aware of their turns and help with the surfboard if necessary. They were super happy and motivated. (Surf Coach)

At school, teachers acknowledge these achievements as well in terms of the personal and social development of their students:

> It was good for them [pupils previously referred due to indiscipline at school] because there's the social dimension, the rules … To practice any sport, they must have rules, and I think that this aspect was very important. I would also like to emphasise the boost they had in self-confidence, which is sometimes difficult. They were a little afraid at the beginning about the sport and the sea … They have never surfed … But overcoming that fear and that first step was very good for their self-confidence. (Schoolteacher)

It is important to place these findings in a more critical framework and acknowledge that personal and social developments are not simply universal outcomes of all surf therapy interventions. As observed by R. Olive (2023), surf therapy programme participants' experiences are shaped by their positioning within ecological, social, and power relations that extend beyond the immediate therapeutic context. The positive developments observed here must therefore be understood as specific to this particular intervention, albeit likely to emerge in other programmes, and depending not only on the socio-cultural environment in which the '*Onda Social*' project operates, but also on its particular implementation model. For instance, the fact that '*Onda Social*' includes activities with the specific goal of developing social and emotional skills such as confidence and communication alongside the physical activity of surf, as illustrated in the example given by the surf coach, may be one of the key elements explaining the positive outcomes observed in this study. Moreover, this is in line with the core elements observed by

Matos et al. (2017) for an effective intervention in surf therapy, where the intentionality of developing social and emotional competences becomes as important as the acquisition of surf skills.

Well-being

Regarding the programme's impact on students' mental health, in our analysis we considered the following dimensions: emotional, psychological and social well-being (Lamers et al., 2011). When it comes to emotional well-being – the individual's ability to manage emotions through self-knowledge, favouring the construction of positive relationships and high self-esteem (Keyes, 2014) – being in a natural environment (and particularly the beach) has been shown to promote positive feelings and better regulation of negative emotions (Drake et al., 2021). This is corroborated by a young participant:

> Sometimes, I come to the activity in the morning, and I don't feel like surfing. But when I see the sea, everything changes. I can be nervous or whatever but, when I enter the ocean, I forget about all my problems. (Participant 2)

This excerpt clearly illustrates how surf environments facilitate affective practices that can transform initially negative emotional states.

Social well-being is associated with the need of human beings to feel that they belong to a community and encompasses social integration, social acceptance, social contribution, social updating, and social coherence as indicators (Keyes, 2014). At this level, the analysis of the collected materials highlights the crucial importance of this project when it comes to social integration and acceptance:

> The students mentioned that at school they are often negatively perceived and therefore feel that they are not capable. About surfing, they say 'We all have qualities, although we don't always believe we have them. We praise each other, that's who we are!' Some students were surprised by the praise they received. (Project Psychologist)

The programme's impact on the social well-being of young people is also visible through the positive relationships they built during the semester and the impact they had on their happiness and overall well-being. This was noted by a schoolteacher:

> What stood out the most was the greater interaction between the '*Onda Social*' coach and the participant and between the participants and other students (at school). The pleasure and enthusiasm for the project blossomed and it was so big that the participants felt the need to share those feelings and experiences (with non-participant colleagues). Therefore, (it promoted) more verbal interaction, and more joy. (Schoolteacher)

These observations align with Cook's (2022) ethnographic findings on surfing communities, particularly his concept of a 'one world tribe', which describes how surfing environments can facilitate inclusive social connections across diverse participants, further contributing to improved social well-being.

Moreover, references to joy and happiness are frequent in the collected interviews with children and young people. This underlines Fredrickson and Joiner's (2002) conclusion that positive emotions accumulate and compound, increasing the odds that an individual will find positive meaning in subsequent events and experience additional positive emotions. Despite narratives of initial fears and some struggles, the accounts of the young participants are strongly marked by positive emotions:

> I was feeling sad for a while because I had depression, and when the [surfing] classes started, I was feeling so-so, but now I am well. Now I am happy and doing new things. During [the classes] I feel happiness and enthusiasm. (Participant 3)

> It's good for the mind and we have fun in the water. (Participant 4)

The frequent references to joy and happiness in participants' accounts highlight the affective-emotional process that extends beyond mere positive affect descriptions. Analysing these accounts through the conceptualisation of 'joy' provided by Watkins et al. (2018, p. 525) reveals that surf therapy can enable what they frame as an 'upward spiral' of positive emotions that enhances well-being.

A similar impact of the project is noted by surf coaches. For instance, once reflecting upon one pupil in particular, a surf coach stated:

> He always arrives motivated, with a smile on his face from the beginning to the end of the class. He has a lot of fun in the sea, he really likes to catch waves with his surfboard, and he doesn't give up, even on the most difficult days. (Surf Coach)

The analysis of the diverse materials revealed improvements at several levels of psychological well-being, as defined by Ryff and Keyes (1995), such as:

- Self-acceptance: 'I was able to accept my body more, I started to feel better about myself'. (Participant 3)
- Purpose in life: 'What I always say is that for people who think they are weak and can't achieve their goals, they should fight for it because then they can achieve everything they want! Just fight for it'. (Participant 2)
- Personal growth: 'I once managed to stand up and I lost my fear when a big wave came over me. Now I can surf and I'm not afraid anymore. I can surf, if I go into the water, I can do it'. (Participant 5)

The participants also shown signs of increased autonomy during the semester and became aware of their progress, which they shared with their surf coach:

> It was raining but they were motivated to get into the water. They entered the sea and did the warm-up with a group game in the water. They had a lot of fun! At the end, each one shared with the group what they had overcome during the session. Some things they said were: 'I was able to put on the suit by myself, without help', 'I was able to catch a wave' and 'Now I can read the sea current better, and I don't get carried away so easily'. (Surf Coach)

These accounts underline perceptions of the impact of this intervention on participants' life, promoting a variety of skills but, mostly, strengthening social, emotional and psychological well-being. While such powerful accounts align with existing literature focusing on the potential of blue space for enhancing well-being among different groups (Marshall et al., 2021; Wheaton et al., 2020), it is essential to interpret these findings critically.

Firstly, it is important to note that the positive outcomes and feelings described by our participants may emerge from the interaction of multiple elements, including the structured nature of this intervention, the potential of the blue environment, and the supportive interpersonal context created by this project's team. Secondly, as highlighted by Moreton et al. (2022), caution is needed before establishing causal mechanisms for the effectiveness of surfing as a therapeutic practice. The emotional benefits observed above must, therefore, be interpreted as a result of this interplay of different factors characterising this intervention rather than as an universal outcome of all surf-based interventions.

Academic outcomes

This project's framework is associated with a set of experiences that favour learning, going beyond the domains of formal and curricular learning. Learning is not just about acquiring skills and knowledge but should be considered a more holistic process in which body, mind and emotions are intrinsic to the construction of individual life experiences (Morrice, 2014). At the same time, there are social and individual competences associated with the school context that are important to

highlight such as interpersonal relationships, commitment, accountability, as well as memory and concentration, frustration management, resilience, emotional competence, time management and autonomy. Improvements in several such competences were noted by a school psychologist:

> There was an improvement and (competence) acquisition in four domains, specifically, emotional, social, student motivation and school performance. Teachers and parents perceived an improvement in the participants and wanted the project to continue. (School Psychologist)

The '*Onda Social*' project seeks to develop these competences and to promote skills that students use at school, yet are not always systematically developed in formal learning contexts (Santos et al., 2020). An aspect that stands out in the analysed data is the development of motivation towards school, and how it stemmed from the contact that participants had with the programme:

> For very unmotivated students, the school means nothing to them, they have behavioural problems … I noticed an improvement. They now look at school differently. (Schoolteacher)

Several participants also reported having a different approach to school, after they started to participate in the surf therapy programme:

> What I always say is that when I get out of the sea, I go home to shower and then, I go to classes, and I feel calmer. I don't want anyone to bother me. I stay at my desk, write down what's on the board. (…) I'm calmer now when I talk to the teachers. I stay calm and understand what the teacher is talking about. (Participant 5)

The results also show that, besides school, participants were able to transfer some of these competences to other life contexts, such as the family. A schoolteacher shared the information she has received from the parents of some children participating in the project:

> Parents referred that they were calmer at home, they were less confrontative with their moms and dads. The mom said 'Go clear the table' and they would do it. Soon, their behaviour at home changed, for the best. They were a little tired [after surfing], but they were more collaborative, and friendlier and were no longer just holding their phones, they actually talk at home, at lunch and dinner. (Schoolteacher)

A crucial element to highlight here is the programme design and the continuous effort of the project team in ensuring effective communication between the triad: Project team – School – Family:

> Everything went very well, we always talked (with the project team). To manage everything. Week by week, they had a WhatsApp group where they communicated all the steps, so we knew about the holidays… And they always communicated with the parents, which was very important for them, to be aware of what was going on. That was very good! (Schoolteacher)

Certainly, school contexts are not dissociated from family contexts, nor does the intervention of the '*Onda Social*' project happen in a social void. To have an impact on the lives of the participants and the multiple contexts they navigate the different actors must be aligned.

While the improvements in academic engagement and motivation are clearly visible in our data, these cannot be attributed exclusively to this surf therapy intervention. Other variables and factors are at play that were not controlled for in the current study. This critical perspective does not diminish the value of participants' reported changes but places them within broader systems that shape educational experiences. The collection of diverse accounts not only from children and young people, but also teachers and school psychologists, provides a glimpse over the potential that this surf therapy programme might have had in improving academic outcomes. We hypothesise that the '*Onda Social*' project's educational impact may stem from the creation of alternative learning environments that can temporarily disrupt established patterns of educational disadvantage and, in some cases, years of school disengagement and lack of motivation for learning. Sarkisian et al.'s (2020) idea of 'hope' is also relevant in understanding the observed changes in academic outcomes. In their observation of only a one-day surf therapy programme, these authors observed significant increases in hope among young participants, with effects sustained even one month after participation. This

finding of surf therapy as an enabler of hope aligns with our participants' accounts about a newfound motivation and positive attitudes towards school following their experience in the '*Onda Social*' project.

Conclusion

This research contributes to our knowledge of sports interventions, namely through surf therapy, an increasingly relevant approach to support the positive development of children and young people. Our findings corroborate previous research results, confirming that surf therapy-based interventions can have significant potential in motivating young people and promoting their emotional, social and psychological well-being. At the same time, it is important to highlight that the benefits of such interventions are dependent on the quality of the project design, a capable and trained team, and constant monitoring and follow-up of the project, accompanied by necessary adjustments. Moreover, a distinguishing element of this particular surf therapy programme is the capacity of engaging different educational actors that are crucial to the development of children and young people, from parents and teachers to school psychologists.

This study does not come without limitations. Despite our qualitative research design, drawing on a diverse set of materials, it was not possible to address perceptions of project impact through a longitudinal perspective, following participants before, during and after the intervention. It is likely that the positive outcomes of the project may not extend long after the participation in the programme has ended. Indeed, a pilot randomised control trial conducted by L. Olive et al. (2023) demonstrated significant short-term improvements in depression, anxiety, and emotional functioning of children and adolescents participating in a surf therapy programme, while simultaneously revealing the non-persistence of therapeutic gains only six weeks after the intervention. Future research on the benefits of surf therapy should adopt methodological tools capable of capturing the impact of surf therapy interventions beyond their specific duration, in a medium and even long-term perspective. At the same time, it is important to acknowledge that educational and socialisation processes are extremely complex, and that it is very difficult to control for the diversity of variables present in the lives and educational trajectories of surf therapy programme participants even during, let alone after the end of these programmes. For this reason, ensuring long-lasting effects may be extremely challenging in the framework of such interventions. Shorter-term effects should nevertheless be acknowledged, since they may positively affect certain relational and educational dynamics that may continue impacting, in one form or another, the positive development of these children and young people.

Whilst the perceptions of 16 participants were included in the study, only a limited number of other key actors in the lives of children and young people were included, namely two schoolteachers and one school psychologist. Additional perspectives could have been gathered if the sample of schoolteachers and school psychologists were larger. Even though perceptions of parents are visible through the accounts of children and teachers, interviews with these actors were not conducted. Given their important role in the lives of children and young people, the study would have benefitted from listening to their perceptions of the project's impact. Moreover, even though participant observation was used by the research team to collect data, due to time and research budget constraints, the information gathered through participation observation was limited. Future research projects would benefit from more instances of participant observation or even an ethnographic approach, which would allow for a gradual understanding of the impact of the programme while it is being developed.

Despite these limitations, the analysis of a diverse set of qualitative data collected throughout the three-year duration of the '*Onda Social*' project allowed the authors of this paper to obtain a detailed picture of the planned surf therapy intervention, its implementation and perceptions of impact. Surf therapy has emerged not only as a means of introducing young people to surfing but also as a transformative tool that can enhance their psychological, emotional, and social well-being.

Moreover, the study shows that competences developed within surf therapy contexts can transfer to other domains, notably family interactions and school engagement. This dimension of transfer, while not the central focus of our analysis, constitutes a significant contribution to the existing literature on sport-based interventions. Unlike many studies that examine outcomes only within the specific intervention context, our findings reveal how core competences such as emotional regulation, communication skills, and positive behaviour, successfully cultivated through the '*Onda Social*' project, appear to have permeated participants' wider social ecosystems. This diffusion of benefits represents a promising area for future research, suggesting that well-designed surf therapy programmes may function not merely as isolated therapeutic experiences but as catalysts for broader transformations across multiple life contexts.

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