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Understanding outdoor sports participants' motivations, connectedness to nature, and wellbeing in Northern Ireland.

Dr Paul Sellars, Professor Diane Crone, Dr Tjerk Moll, & Dr Tabitha Dickson

Executive Summary

Sport Northern Ireland and Tollymore National Outdoor Centre sought to better understand and support a continued surge in outdoor sport participation post COVID-19. A team from the Centre for Health, Activity and Wellbeing Research (CAWR) at Cardiff Metropolitan University was contracted to conduct a four-year project aimed at better understanding the demographic profiles of individuals participating in outdoor sports, their motivations, and the potential relationship between outdoor sport and both nature connectedness and wellbeing. Starting in 2021, the project used a cross-sectional, quantitative approach via an annual anonymised online survey (e-survey).

- A total of 1556 survey responses were captured across four years.
- 76.5% of participants were outdoor sport club members, aged 18 - 90 years with a mean age of 50. Most participants identified as male 60.4% or female 38.7%, heterosexual 93%, of white ethnicity 98%, and of Irish 27.6%, British 25.3%, or Both 24.1% (British and Irish) nationality. Additionally, 7% stated they had a disability, and 57% had dependent child(ren).
- The most frequently cited main outdoor sport types were cycling (n=455; 29%), hiking (n=170; 11%), angling (n=139; 9%), and orienteering (n=121; 8%).
- The mean time individuals spent per week participating in their main outdoor sport was 5.77 hours (SD = 14.61 hours), and for all physical activity 8.66 hours (SD = 16.54 hours). On average, their main outdoor sport accounted for 66.64% of all sport and physical activity completed by the participants.
- 63% (n=971) of participants reached the World Health Organization guideline of at least 150 to 300 minutes of moderate, or 75 mins vigorous aerobic activity per week participating in their main outdoor sport. This was irrespective of age, gender, disability, and dependent children status.
- The time spent in nature is notably higher in this study, than the amount per week thought to be associated with good health and wellbeing.
- Findings relating to the reasons for outdoor sport participation are multiple and include combinations of mental, physical, and social health benefits, and nature-based reasons, with no significant differences found across different age groups.
- Experiencing nature was the third most important motivation for participation in outdoor sport for both males and females. When exploring nature connectedness, it was found that females were significantly more connected to nature than males.
- When sport type was split into water or land -based, those who participated in water-based sports were found to have a greater association with the natural environment.
- Reflecting global population level wellbeing scores, 25% of the participants scored in the poor wellbeing or potential depression category. The mean score for outdoor sport participants in Northern Ireland was 62.12 (SD=19.1), above the low wellbeing threshold (a score of ≤ 50).
- The highest scored reason for outdoor sport participation was for mental health. Participating in outdoor sport for mental wellbeing was particularly important for people with a disability and people with dependent children.

Recommendations

Based upon the project findings, recommendations for Sport Northern Ireland and National Governing Bodies (NGBs) are suggested in an aim to support continued outdoor sport participation for all and the associated physical, mental, and social benefits.

Sport Northern Ireland

Facilitate lifelong engagement in outdoor sport	The associated physical activity and wellbeing benefits of outdoor sport were found to be relatively stable regardless of age. Therefore, the promotion of outdoor sport should be targeted and accessible for all ages.
Mental health and wellbeing focus	Promoting the mental health and wellbeing benefits of outdoor sport alongside other benefits is encouraged, and can be aided through collaborations with national and local public health and wellbeing specialists.
Outdoor sport and physical activity for social prescribing	Sport Northern Ireland are well placed to support social prescribing through physical activity via a range of activities in different outdoor environments.
United Nations Sustainable Development Goals	To support people and planet, Sport Northern Ireland should continue to support the United Nations Sustainable Development Goals with particular attention for 'good health and wellbeing' and 'climate action'.

NGBs

Consultations	Meaningful consultation and engagement with participants may help to better understand their motivations for participation in specific outdoor sports and subsequent recruitment and retention.
Peer support	The main motivation for participating in outdoor sport was for mental wellbeing. As such, to support wellbeing and continued physical activity the development of peer support for outdoor sport should be considered.
Additional support for people at risk of low wellbeing	To support wellbeing of sport participants, consideration should be given to; providing staff with mental health and wellbeing training; assigning mental health and wellbeing leads; and clear and accessible signposting.
Specific promotion for women	Targeted events for women which focus upon connectedness to nature may be beneficial in seeking to engage them in outdoor sport and support positive mental health and wellbeing outcomes.
Club membership flexibility	To engage non sport club members, national governing bodies could explore flexible membership approaches (e.g., seasonal membership).
Nature and conservation	Due to the high levels of connection to nature held by participants, where possible seek to engage members in conservation opportunities.

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RESEARCH TEAM

Sport Northern Ireland and Tollymore National Outdoor Centre commissioned a team from the Centre of Health, Activity, and Wellbeing Research (CAWR) at Cardiff Metropolitan University to conduct the current research project. CAWR's vision is to be a world-leading transdisciplinary research centre working with a diverse range of communities that makes a difference to people's health and wellbeing across the lifespan.

The team from CAWR that conducted this current research project


Dr Paul Sellars | CAWR Research Associate
Role: Project Lead
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Professor Diane Crone | CAWR Director
Role: Initial project conception and report production support


Dr Tjerk Moll | Senior Lecturer in Sport Psychology
Role: Statistical analysis support


Dr Tabitha Dickson | CAWR Research Associate
Role: Proof reading, report production support, and design support

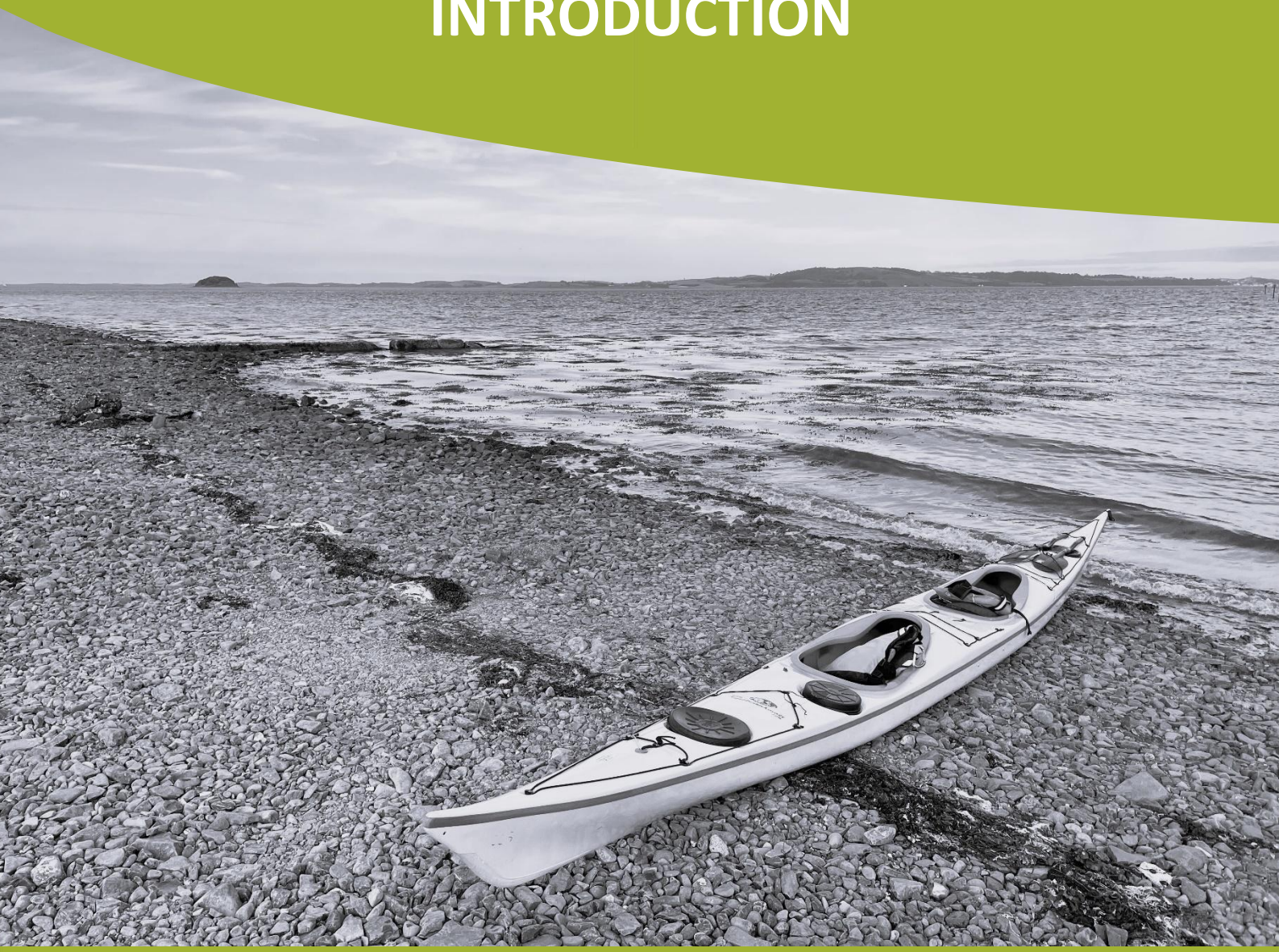
The team would like to thank all those involved in this project with particular thanks to: Sport Northern Ireland and Tollymore National Outdoor Centre, Mike McClure, and Paddy Elliot. Thanks also to Jack Walklett (PhD researcher CAWR). Finally, thank you to all the individuals who gave up their time to support and/or participate in the e-surveys. This research would not have been possible without your support.

Thank you / Diolch

CONTENTS

Citation: Sellars, P. A., Crone, D., Moll, T., & Dickson, T. (2025). Understanding outdoor sports participants' motivations, connectedness to nature, and wellbeing in Northern Ireland: Full report. Centre for Health, Activity and Wellbeing Research, Cardiff Metropolitan University, UK.

INTRODUCTION



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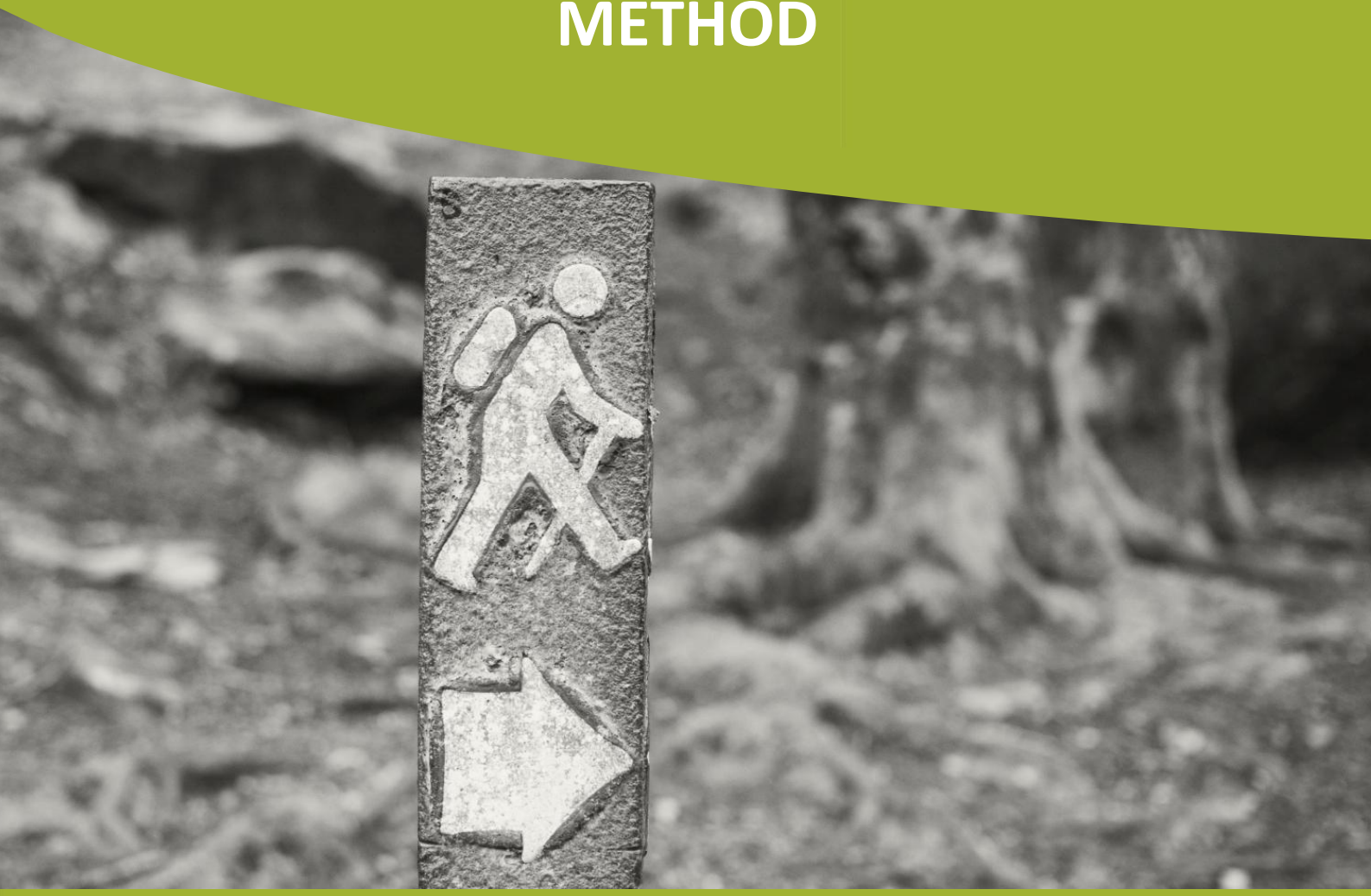
INTRODUCTION

Research context

The COVID-19 pandemic resulted in increased demands and pressures on people's mental and physical health (O'Connor, 2021; WHO, 2020). Statistics from the Northern Ireland Statistics and Research Agency showed that average ratings of anxiety in Northern Ireland significantly increased in the year 2019-2020 (NISRA, 2020). Outdoor physical activity, exercise, and sport offers numerous physical, mental, and societal benefits (Dobson et al., 2019; Eigenschenk et al., 2019). During the COVID-19 pandemic physical activity was emphasised as being vital for individuals' physical health and wellbeing, and was identified by numerous Governments as a permitted reason for leaving the house during lockdowns. Thus, supporting the mental health burden related to the COVID-19 outbreak (Caputo & Reichert, 2020; Jenkins et al., 2022; Outdoor Recreation Northern Ireland, 2020).

In Northern Ireland, participation in outdoor physical activity increased during the COVID-19 lockdown (Outdoor Recreation Northern Ireland, 2020). Following the easing of lockdown measures, it has been indicated that this increase in outdoor physical activity may continue (Outdoor Recreation Northern Ireland, 2020). As such, Sport Northern Ireland and Tollymore National Outdoor Centre sought to better understand and support this continued surge in outdoor sport participation. To reach their aim, they contracted a team from the Centre for Health, Activity and Wellbeing (CAWR) at Cardiff Metropolitan University to conduct a four-year project. The project aimed to better understand the demographic profiles of individuals participating in outdoor sports, motivations of outdoor sport participants, and the potential relationship between outdoor sport and both nature connectedness and wellbeing.

METHOD



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METHOD

Approach

Starting in 2021, the project used a cross-sectional, quantitative approach via an annual anonymised online survey (e-survey). The e-survey aimed to capture perspectives of current outdoor sports club participants in Northern Ireland regarding demographic details, current outdoor sport participation, motivators for outdoor sport participation, connection to nature, and wellbeing.

Measures

The e-survey asked participants to respond to questions regarding their:

- Demographic details: age, gender, ethnicity, nationality, disability, sexual orientation.
- Outdoor sport participation: main outdoor sport, club membership, participation length, proficiency, and access to the natural environment for outdoor sport.
- Physical activity level: time spent participating in outdoor sport, time spent in all physical activity, intensity level.
- Motivation to take part in outdoor sport: Seven questions regarding participants' reason(s) for participating in their main outdoor sport.[1]
- Connection to nature: Nature Connectedness Index (Richardson et al., 2019)[2].
- Wellbeing: World Health Organization – Five Well-being Index (WHO-5).
- Previous survey completions: participants were asked to report on whether they had previously completed the surveys.

[1] As an appropriate validated questionnaire for reasons for outdoor sport participation was not available, outdoor sport specific questions were devised by Sport Northern Ireland and Tollymore National Outdoor Centre.
[2] Richardson, M., Hunt, A., Hinds, J., Bragg, R., Fido, D., Petronzi, D., Barbett, L., Clitherow, T. and White, M., 2019. A measure of nature connectedness for children and adults: Validation, performance, and insights. Sustainability, 11(12). doi.org/10.3390/su11123250

Participants

Recruitment involved the distribution of an anonymised e-survey link, sent by outdoor sport governing bodies (via Sport Northern Ireland) to club members aged 18+ years. Each year the survey was open from February/March for approximately four months. Following a data checking, a total of 1556 survey responses were captured across the four years (see Table 1 for breakdown). While responses received were anonymous, participants were asked if they had completed different iterations of the survey. Approximately 10% of participants stated they had completed the survey on two or more occasions (n=158).

Table 1: Survey completion rates

Survey year	Participant numbers	Percentage
2021	640	41.1%
2022	415	26.7%
2023	400	25.7%
2024	101	6.5%

Analysis

Statistical analysis was conducted using Excel and SPSS, and included tests such as t-tests, ANOVAs, regression, crosstabs, chi-square, and odds ratio.

RESULTS

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RESULTS

Across the four years 1556 surveys were completed[3].

Taking the results from all four years, combined the results include the topic areas below.

1. Demographic details
2. Outdoor sport participation
3. Physical activity levels
4. Motivation: reasons for outdoor sport participation
5. Connectedness to nature
6. Physical activity guideline attainment
7. Wellbeing

[3] For year specific findings please see the links to specific reports in the appendices

Demographic details

Below is a summary of the demographic details of participants who completed any of the surveys during 2021-2024, considering: age, gender, ethnicity, nationality, sexual orientation, disability, and dependent children.

- Age: mean age 49.98 years (SD=13.34), ranging between 18 and 90 years - breakdown of age groups is presented in Figure 1
- Gender: Male 60.4% (n=940), Female 38.7% (n=603), non-binary 0.4% (n=6)
- Ethnicity: White 98% (n=1524)
- Nationality: Irish 27.6% (n=428), British 25.3% (n=393), Both 24.1% (British and Irish; n=374), Northern Irish 9.8% (n=152)
- Sexual orientation: Heterosexual 93% (n=1442), Bisexual 2.3% (n=35), Homosexual 1.6% (n=25)
- Disability: No 92.5% (n=1437), Yes 6.8% (n=106) – identified disability is presented in Table 2
- Dependent children: No 56.9 (n=883), Yes 42.4% (n=659)

Figure 1: Graph demonstrating participant age in groupings

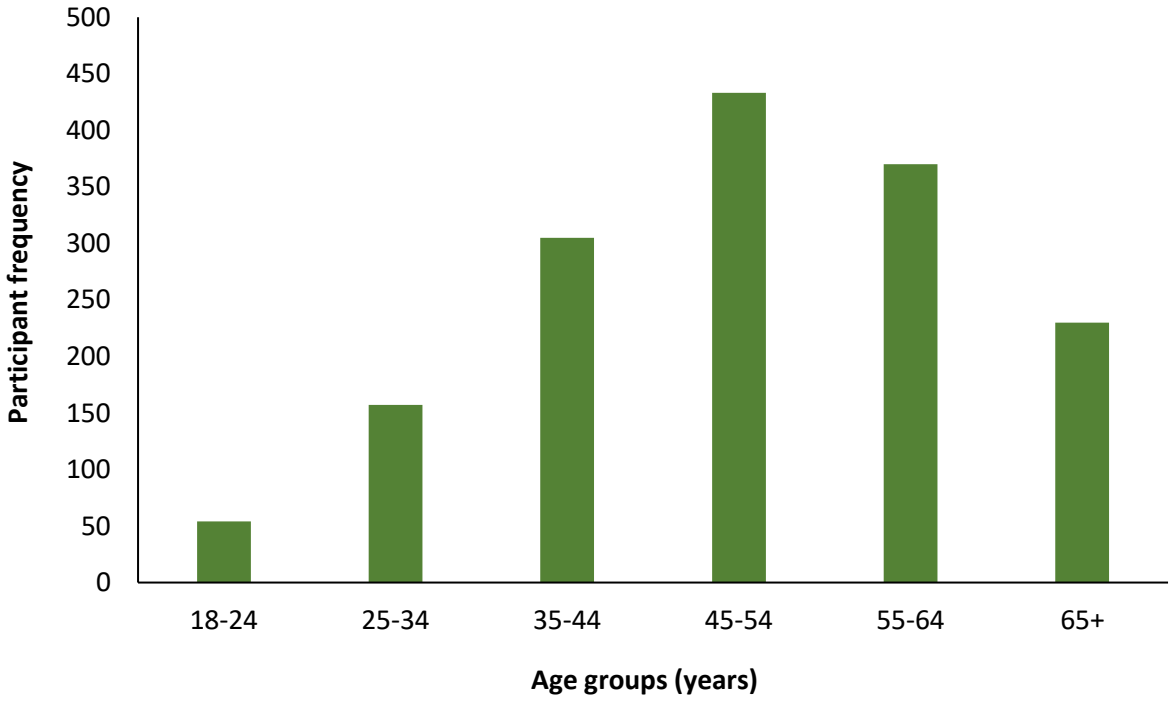


Table 2: Disabilities by type

Disability	n =
Learning disability	12
Physical disability	49
Mental health disability	17
Open text response	26

Outdoor sport participation

The Information gathered relating to participants' outdoor sport participation included:

- Main outdoor sport type
- Club membership status
- Who respondents participate with when taking part in their main outdoor sport
- Perceived proficiency level
- Experience of access

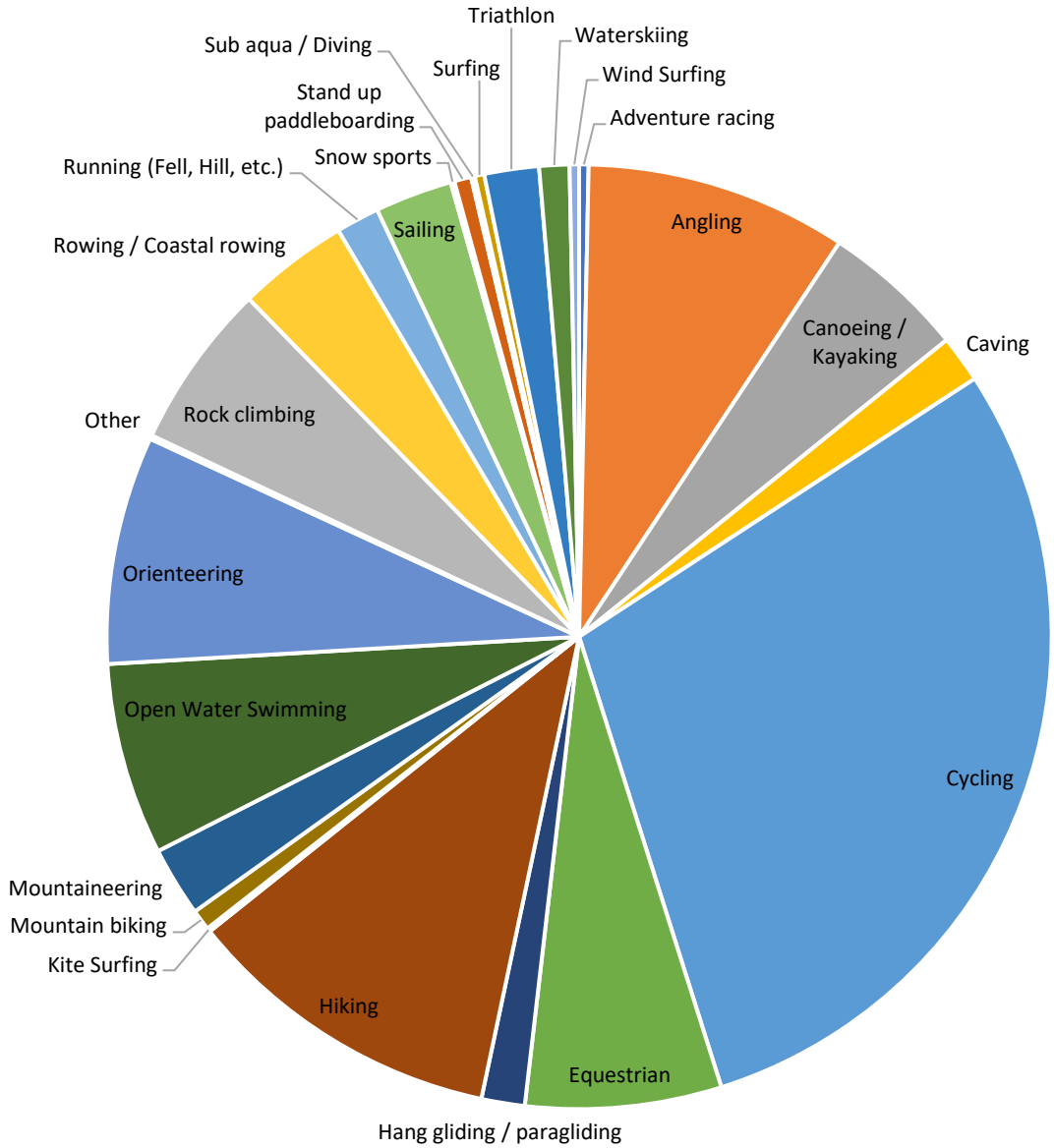
Main outdoor sport type

Participants were asked to identify their main outdoor sport, these are highlighted in the table and chart below (Table 3; Figure 2). The most frequently cited main outdoor sport was: cycling (n=455), hiking (n=170), angling (n=139), and orienteering (n=121).

Table 3: Table showing participants' main outdoor sport.

Main outdoor sport type	Frequency (n=1551)	Percent (%)
Adventure racing	5	0.3
Angling	139	9.0
Canoeing / Kayaking	76	4.9
Caving	25	1.6
Cycling	455	29.3
Equestrian	104	6.7
Hang gliding / paragliding	23	1.5
Hiking	170	11
Kite Surfing	2	0.1
Mountain biking	11	0.7
Mountaineering	37	2.4
Open Water Swimming	102	6.6
Orienteering	121	7.8
Other	2	0.1
Rock climbing	88	5.7
Rowing / Coastal rowing	59	3.8
Running (Fell, Hill, etc.)	23	1.5
Sailing	41	2.6
Snow sports	2	0.1
Stand up paddleboarding	9	0.6
Sub aqua / Diving	2	0.1
Surfing	5	0.3
Triathlon	29	1.9
Waterskiing	16	1.0
Wind Surfing	5	0.3

Figure 2: Chart demonstrating participants' main outdoor sport type (%)



Club membership status

Participants were asked to indicate if they were a member of an outdoor sport club. Additionally, in the 2022, 2023, and 2024 surveys, participants were asked to identify the main reason for their membership status. A series of pre-determined statements relating to membership status were provided[4] alongside an 'other' option which invited an open text response to be added where statements did not apply.

Figure 3: Club membership status and reasons for status

76.5% (n=1189) club members

Main reason for membership (n=790)	
Social / community interaction	61.14% (n=483)
Competition opportunities	16.58% (n=131)
Other	15.32% (n=121)
Insurance	4.81% (n=38)
Safety consideration	2.15% (n=17)

22.4% (n=349) not members

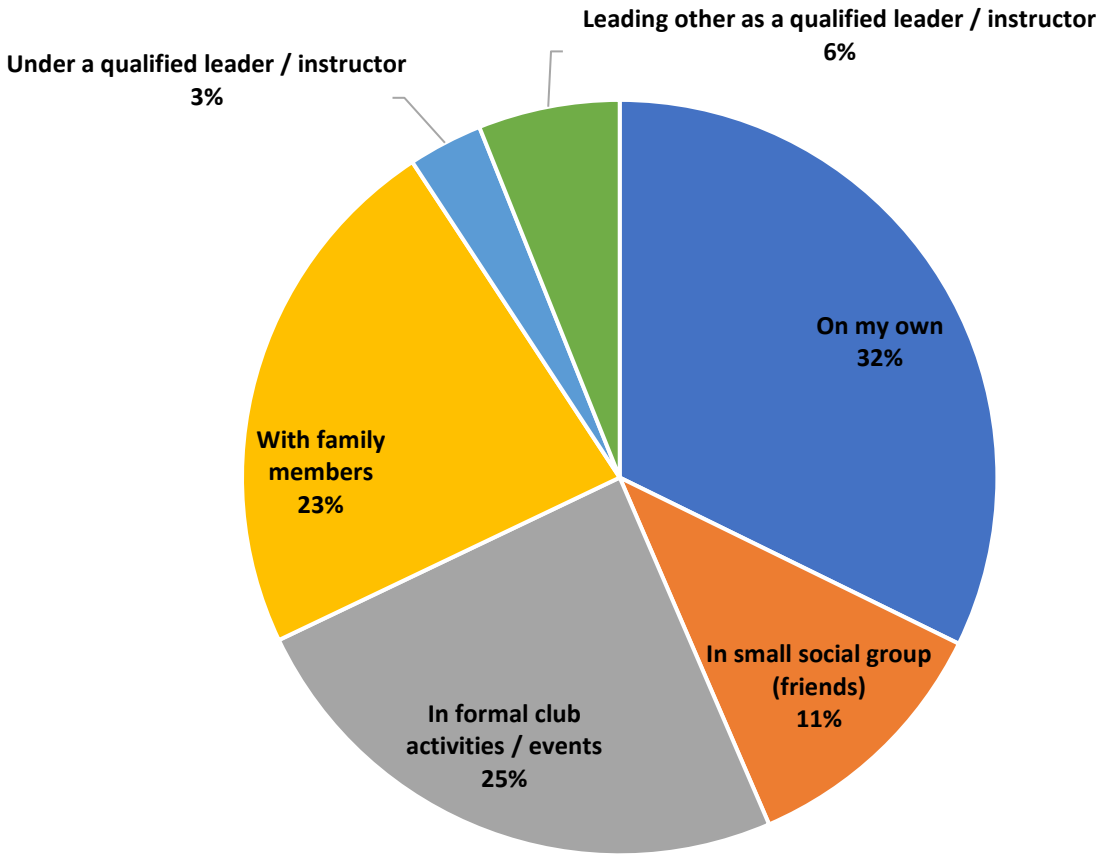
Main reason for non-membership (n=151)	
Prefer the flexibility and freedom of not being in a club	61.59% (n=93)
Other	19.21% (n=29)
Not aware of a club near me	14.57% (n=22)
Do not feel it is accessible	4.64% (n=7)

[4] The predetermined options were developed in collaboration with Sport Northern Ireland and Tollymore National Outdoor Centre

Who respondents participate with when taking part in their main outdoor sport

Participants were asked to indicate who they participated with in their main outdoor sport. Specifically, this involved participants being provided with six participation groups (as outlined below) and then assigning a percentage of time to each. The most frequently cited participation groups were 'on my own' (32.08%) and 'in small social group' (24.26%).

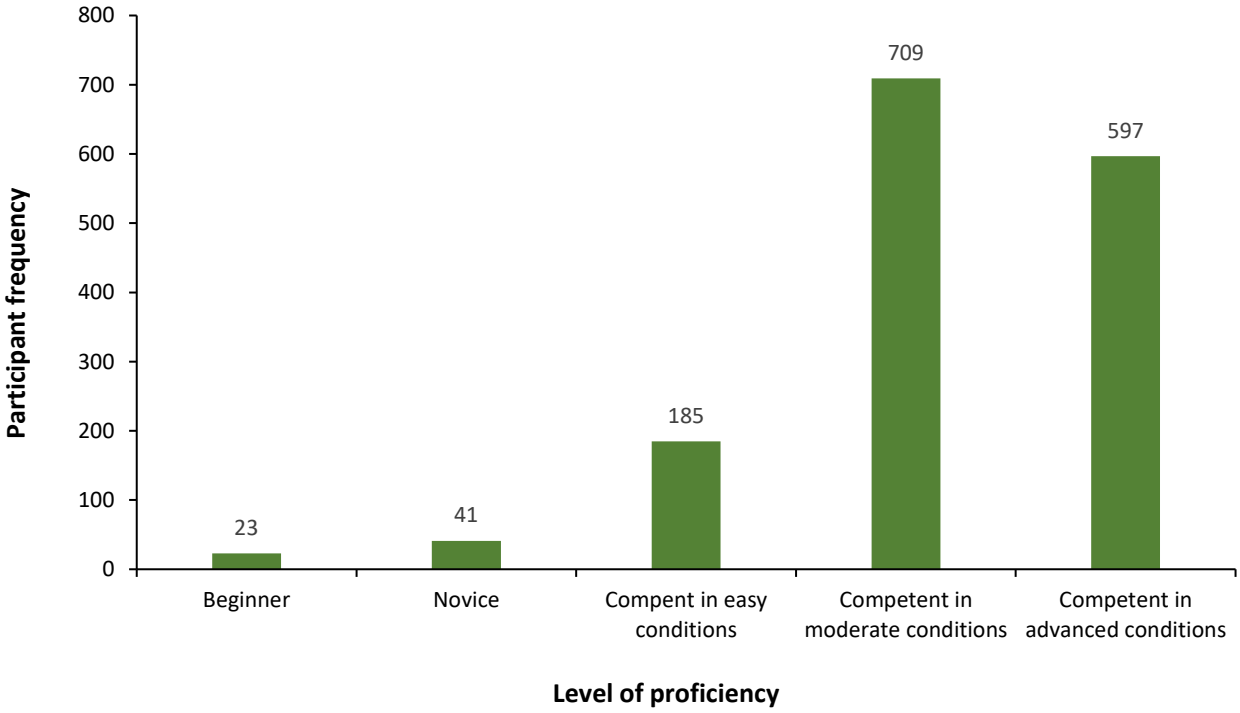
Figure 4: Chart showing the breakdown of who individuals participate in their main outdoor sport with



Proficiency level in main outdoor sport

Participants were asked to rate their perceived level of proficiency in their main outdoor sport. The majority of participants perceived themselves to be competent in moderate or advanced conditions (n=1306; 83.99%).

Figure 5: Graph demonstrating level of proficiency in main outdoor sport



Experience of access

Participants were asked if they had ever experienced an issue regarding access to the natural environment when participating in outdoor sport[5]. Approximately 40% of participants (n=387) stated they had experienced an issue with access, and provided a brief text response (n=374) detailing the issues encountered . The open text responses were analysed, resulting in 10 themes regarding issues of access to nature for outdoor sport.

[5] Data was from 2022, 2023, and 2024

Figure 6: Issues regarding access to nature for outdoor sport

Discrimination or confrontation n=27

- "Poor disabled access"
- "As a horse rider I am excluded from so many places"
- "A fisherman said he was calling the Police, claiming we had no right to be on the water"

Site closures or access removed n=20

- "Limited access to some beaches at certain times of the year"
- "Woodlands are often closed off to Mountain Bikers, off shore islands can be closed off to Sea Kayakers hoping to land/ visit and experience the nature/ island"

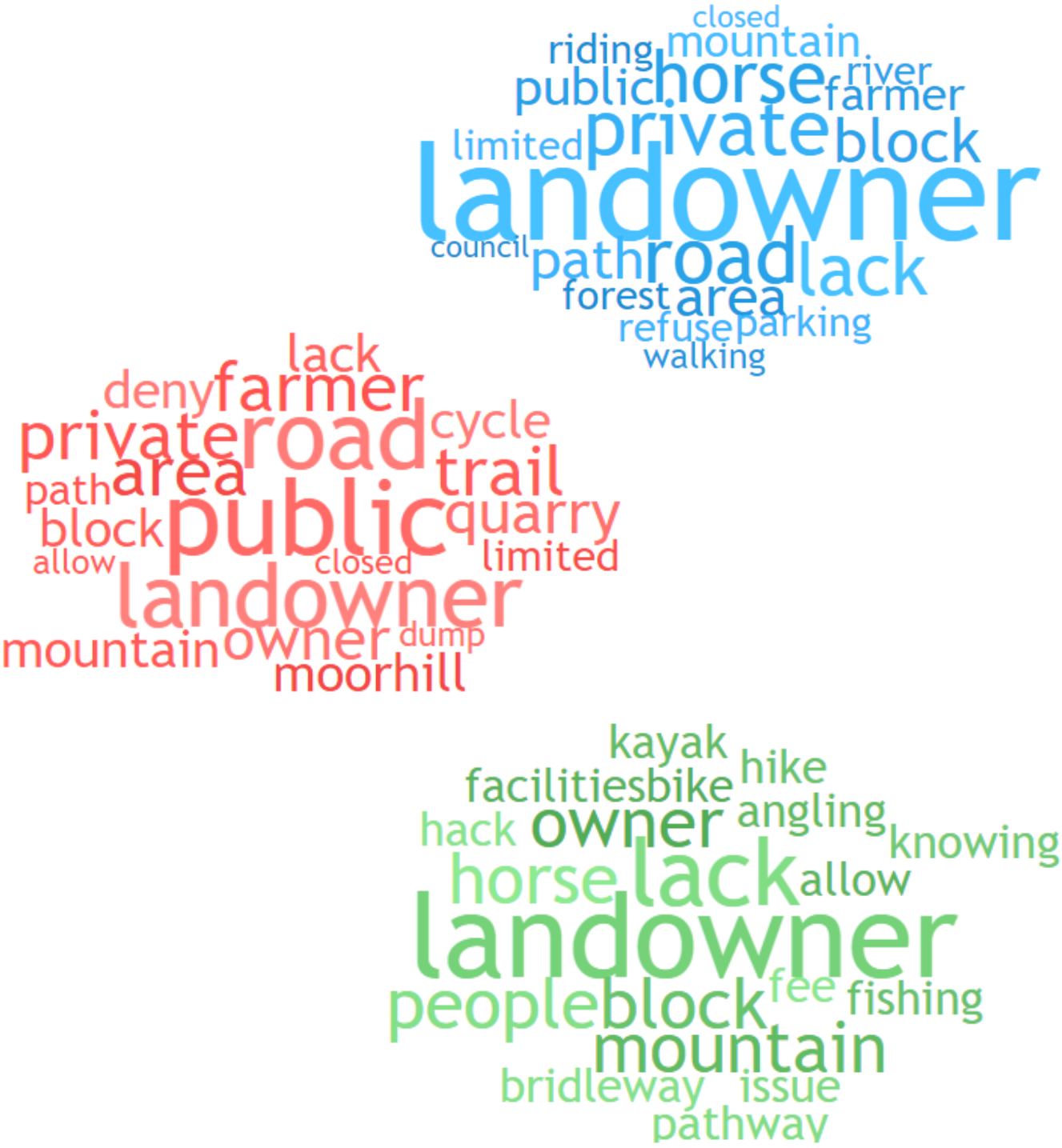
Uncertainty around access n=15

- "Being denied access to a walk I had previously travelled years before"
- "Unsure where I can go off (bound) roads"

Safety concerns n=14

- "Riders in N.I. have little or no access to the natural environment with no adequate bridleway system and are in constant danger riding on public roads"
- "Unsafe water due to bacteria"

Figure 7: Word clouds showing words most associated with access issues for outdoor sport in 2022, 2023, and 2024[6]



[6] 2022=blue, 2023=red, 2024=green

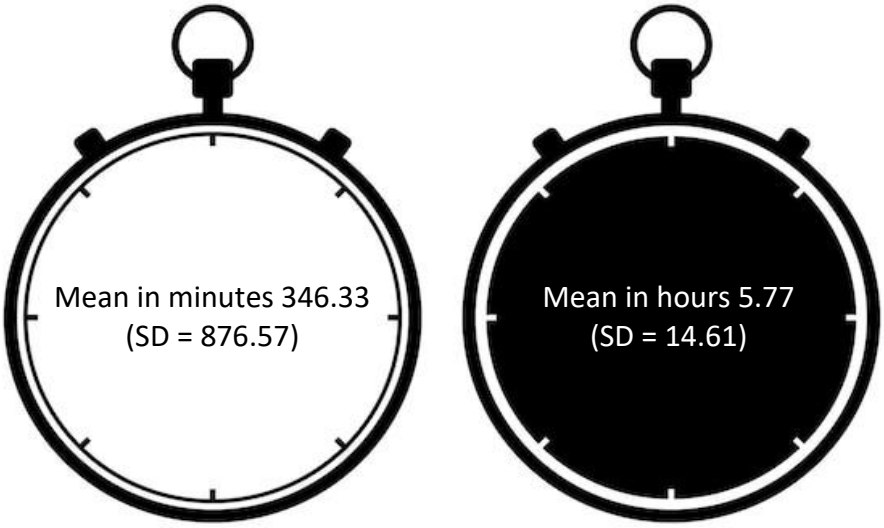
Physical activity levels

Information regarding participants' physical activity levels included:

- time participating in main sport per week
- time participating in all sport and physical activity per week
- change in physical activity participation levels
- intensity of main outdoor sport participation
- World Health Organization physical activity guideline attainment.

Time participating in main outdoor sport per week:

Participants were asked how much time they spent participating in their main outdoor sport per week (on average).



Time participating in all sport and physical activity per week

In addition to time spent participating in their main sport, the survey also asked participants to state how much time they spent participating in all sport and physical activity each week. Participants stated that on average they took part in 519.67 (SD = 992.53) minutes or 8.66 (SD = 16.54) hours of sport and physical activity in a week. Using the data provided, it was calculated that on average, time spent participating in their main outdoor sport accounted for 66.64% of participants' sport and physical activity per week.

Table 4. Time spent participating in sport and physical activity per week

Activity	Minutes per week Mean (SD)	Hours per week Mean (SD)
Main sport only	346.33 (876.57)	5.77 (14.61)
All sport and physical activity (including main sport)	519.67 (992.53)	8.66 (16.54)

Change in physical activity participation levels

Each year participants were asked a question regarding their perceived amount of time spent participating in outdoor sport. Across the four years, the specific question was altered based upon the needs of Sport Northern Ireland and Tollymore.

Perceived change in amount of time spent participating in outdoor sport and physical activity 2021/2022: Participants indicated the amount of change via a single sliding scale from '*my participation has decreased by 100%*' to '*my participation has increased by 100%*'. In 2021 and 2022 surveys, participants were asked to demonstrate if the amount of time they spent participating in their main outdoor sport had changed since the start of the COVID-19 pandemic.

Table 5. Perceived change in time spent participating in outdoor physical activity compared to the previous 12 months (2021 and 2022)

	Decreased by 100 to 51%	Decrease by 50 to 1%	No change	Increased by 1 to 50%	Increased by 51 to 100%
2021 - Approx. % of participants	35%	20%	8%	20%	17%
2022 - Approx. % of participants	10%	25%	15%	30%	20%

Perceived change in amount of time spent participating in outdoor sport and physical activity 2023/2024: In 2023 and 2024, participants were asked to respond in the same manner to the question, *"over the last 12 months, how much time have you spent participating in outdoor sports compared to the previous 12 months?"*

Table 6. Perceived change in time spent participating in outdoor physical activity compared to the previous 12 months (2023 and 2024)

	Decreased by 100 to 51%	Decrease by 50 to 1%	No change	Increased by 1 to 50%	Increased by 51 to 100%
2023 - Approx. % of participants	1.9%	15.9%	24.4%	43.8%	14%
2024 - Approx. % of participants	0%	18.7%	24%	39.6%	17.8%

Time spent participating in main outdoor sport across the last seven days

Participants were asked to indicate the amount of time (minutes per day) they had spent participating in their main outdoor sport over the last seven days[7].

Table 7. Mean minutes per day spent participating in main outdoor sport

Day	2022		2023		2024	
	Minutes mean	n=	Minutes mean	n=	Minutes mean	n=
1	93.87	321	111.26	297	131.85	79
2	66.84	263	70.7	263	125.57	75
3	84.37	267	69.55	274	96.13	75
4	67.23	259	85.51	266	77.11	66
5	69.74	269	62.33	252	82.58	66
6	61.57	253	74.87	271	85.9	67
7	72	265	81.44	265	91.47	68

Results showed that on all occasions the mean for physical activity in their main sport was above one hour, with a range of 61.57 to 131.85 minutes.

[7] Data from 2022, 2023, and 2024 surveys

Intensity of main outdoor sport participation

Participants were asked to select the level of intensity when participating in their main outdoor sport.

14.5% (n=226) Easy	55.5% (n=863) Moderate	30% (n=466) Vigorous
• Easy effort, breathing normal but slightly raised	• Moderate effort, breathing somewhat harder than normal	• Significant hard effort, breathing much harder than normal

World Health Organization physical activity guideline attainment

The World Health Organization (WHO, 2020) recommends at least 150 to 300 minutes of moderate aerobic activity per week or 75 mins vigorous (see Figure 8). To better understand outdoor sport participants physical activity levels, we calculated whether participants reached the WHO recommendation. Using the average time spent in main outdoor sport, and the intensity level, it was calculated that 63% (n=971) of participants reached the WHO guideline just from taking part in their main sport alone. Additionally, when exploring the WHO recommendations using time and intensity from all sport and physical activity, 70.4% of the participants reached the WHO guideline. Therefore, the majority of individuals who met the WHO guideline did so by participating in just their main outdoor sport.

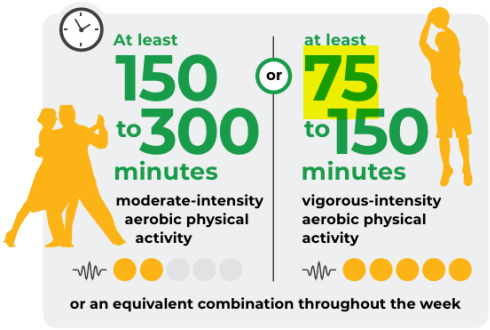


Figure 8: Imagine taken from WHO guideline on physical activity and sedentary behaviour: at a glance (2020) pp.4

63%

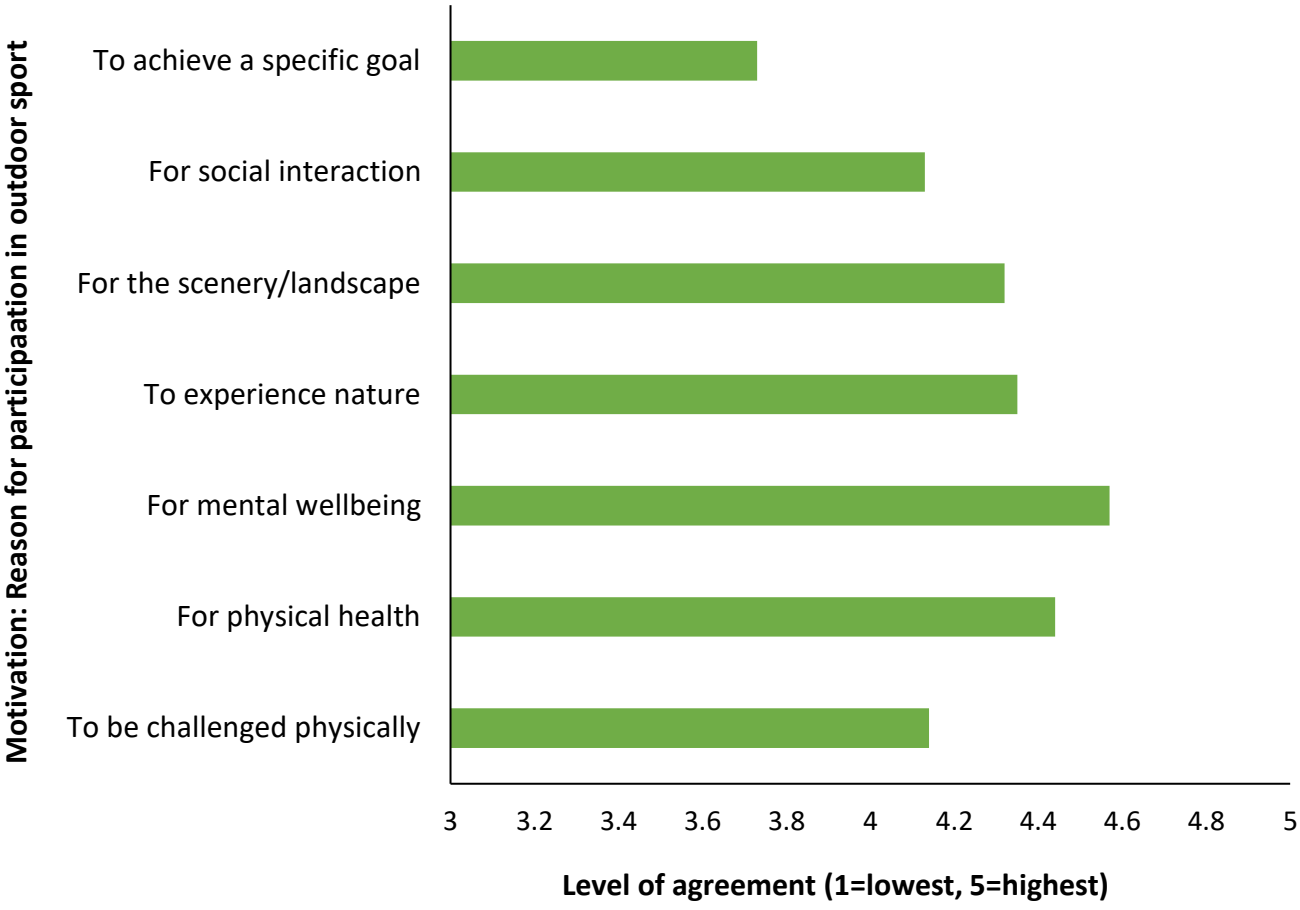
The percentage of participants who met the WHO guideline for physical activity from just their main outdoor sport participation.

Motivation: reasons for outdoor sport participation

Reasons for participating in outdoor sport

To better understand participants' motivation for taking part in outdoor sport, they were asked to demonstrate their level of agreement[8] to seven statements regarding reasons for participation[9]. Results showed that there was large scale agreement for the majority of the seven devised reasons for participation (see Figure 9). The highest level of agreement given was '*For mental wellbeing*' while '*To achieve a specific goal*' had the lowest.

Figure 9. Reasons for participation and levels of agreement



[8] There were five levels of agreement: Strongly disagree; Disagree; Neither; Agree; and, Strongly Agree.
[9] As an appropriate validated questionnaire for reasons for outdoor sport participation was not available, outdoor sport specific questions were devised by Sport Northern Ireland and Tollymore National Outdoor Centre.

Table 8. Reasons for participation and levels of agreement

Motivation: Reason for participation	Level of participant agreement (1=lowest and 5=highest; mean (SD))
To achieve a specific goal	3.73 (.95)
For social interaction	4.13 (.89)
For the scenery/landscape	4.32 (.77)
To experience nature	4.35 (.78)
For mental wellbeing	4.57 (.74)
For physical health	4.44 (.78)
To be challenged physically	4.14 (.93)

Outdoor sport motivations - gender, age, sport participation type, disability, dependent children, and attainment of recommended WHO physical activity guideline

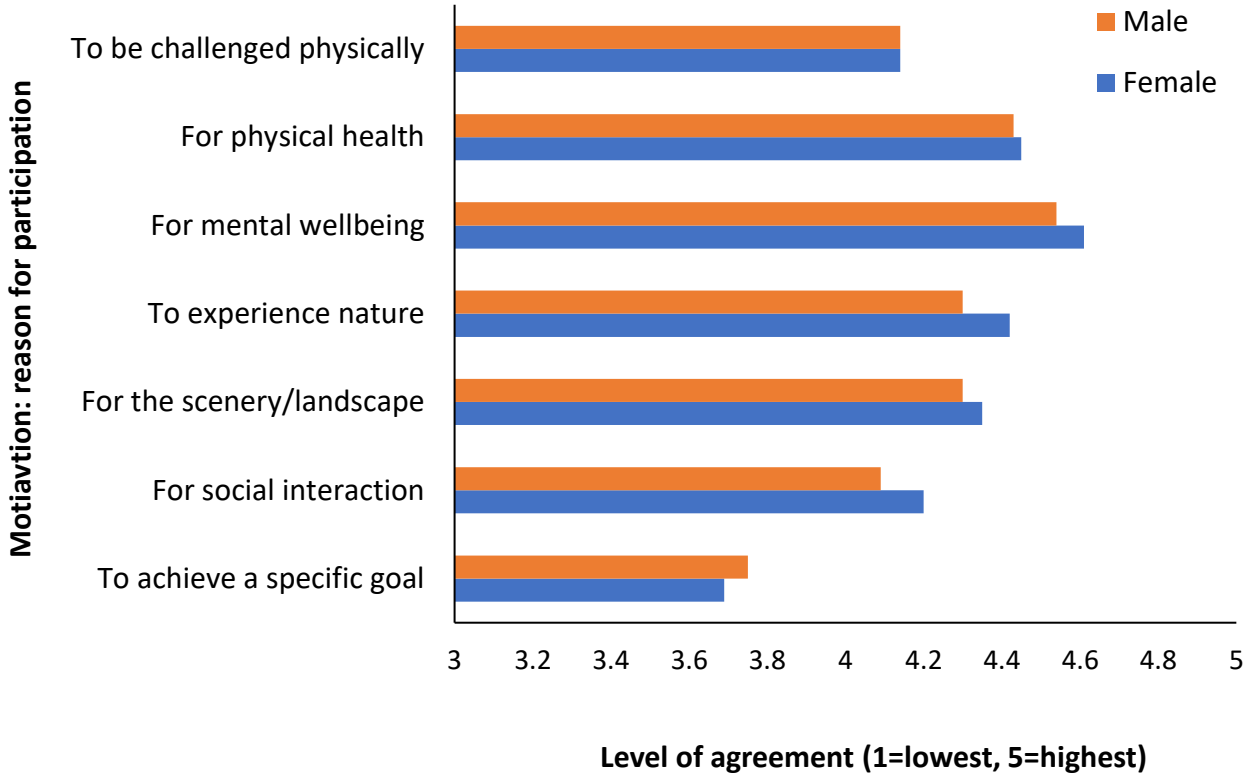
In addition to investigating the level of agreement on reasons for participating in outdoor sports, statistical analysis was conducted to see if the reasons for participation differed based upon different groups: gender, age, sport type, and disability. To investigate these four areas, the levels of agreement were assigned a number[10], and statistical analysis was conducted. As such, scores ranged from 1 to 5 for each of the seven statements, with a higher score indicating a higher level of agreement with the reason for participation. Comparisons between the reasons for participation in outdoor sport and gender, age, sport type, and disability are described below.

Motivation - gender

Gender (female n=594, male n=925) demonstrated similar levels of agreement scores across the seven reasons for participation. Females mean scores for '*To experience nature*' (4.42; SD=0.75) and '*For social interaction*' (4.20 SD=0.90) were significantly higher than males (To experience nature: M=4.30, SD=79; For social interaction M=4.09, SD=0.88).

[10] Strongly disagree = 1; Disagree=2; Neither=3; Agree=4; and, Strongly Agree=5

Figure 10. Reasons for participation and levels of agreement based on gender



Motivation - age

Age in years was split into the 6 groups as shown in Figure 1 (18-24, n=54; 25-34, n=157; 35-44, n=305; 45-54, n=433; 55-64, n=370; 65+, n=230). There were no significant differences between age groups with respect to reasons for outdoor sport participation.

Motivation - disability

Participants were split into two groups; people who identified as having a disability (n=105) and those who did not (n=1423). Individuals who identified as having a disability scored significantly lower than individuals who did not for '*To be challenged physically*' and significantly higher '*for my mental well-being*'.

Table 9. Reasons for participation with significantly different levels of agreement based on identifying as having a disability or not

Motivation: Reason for participation	Level of participant agreement (1=lowest and 5 highest; Mean (SD))	
	Disability	No disability
To be challenged physically	3.91 (1.10)	4.16 (.92)
For my mental well-being	4.79 (.45)	4.55 (.76)

Motivation - sport type

Sport type was split into two categories: land sports (n=1056) and water sports (n=452)[11]. Land sports scored significantly higher than water sports for the reasons '*to be challenged physically*' and '*for physical health'*. Water sports scored significantly higher for '*to experience nature'* and for the '*scenery/landscape'.*

Table 10. Reasons for participation with significantly different levels of agreement based on sport type

Motivation: Reason for participation	Level of participant agreement (1=lowest and 5 highest; Mean (SD))	
	Land sports	Water sports
To be challenged physically	4.28 (.83)	3.79 (1.07)
For my physical health	4.54 (.69)	4.2 (.90)
To experience nature	4.3 (.78)	4.49 (.75)
For the scenery/landscape	4.3 (.77)	4.41 (.78)

Motivation - dependent children

Individuals were asked if they had dependent children and responses were divided into two categories: yes-dependent children (n=653) and no-dependent children (n=875). People with dependent children gave significantly higher scores for '*to be challenged physically*' and '*for mental well-being*'.

[11] Those sports which could not be separated into land or water were not included in this analysis (e.g., triathlon)

Table 11. Reasons for participation with significantly different levels of agreement based on having dependent children

Motivation: Reason for participation	Level of participant agreement (1=lowest and 5 highest; mean (SD))	
	Dependent children	No dependent children
To be challenged physically	4.2 (.89)	4.1 (.96)
For my mental well-being	4.62 (.72)	4.54 (.76)

Motivation - Attainment of recommended WHO physical activity guideline

Individuals were split into those who reached the WHO recommended physical activity guideline (n=961) owing to time spent participating in their main outdoor sport and those who did not (n=563). Those who met the guideline through their main sport scored significantly higher for '*to be challenged physically*', '*for my physical health*', '*to experience nature*', and '*to achieve a specific goal*'. In contrast, the scores 'for the scenery/landscape' were significantly lower than those who did not meet the guideline.

Table 12. Reasons for participation with significantly different levels of agreement based on meeting WHO physical activity guideline

Motivation: Reason for participation	Level of participant agreement (1=lowest and 5 highest; mean (SD))	
	Guideline met	Not met guideline
To be challenged physically	4.3 (.85)	3.87 (1.01)
For my physical health	4.59 (.68)	4.21 (.87)
For the scenery/landscape	4.28 (.8)	4.4 (.7)
To achieve a specific goal	3.8 (.94)	3.62 (.96)

Connectedness to nature

To understand levels of connection to nature, participants were asked to complete the Nature Connectedness Index (NCI; Richardson et al., 2019). The NCI contains six items and uses a weighted scoring system with overall scores ranging from 0 to 100 (100 indicating the highest level of connectedness to nature). A mean score of 58.39 (SD=23.331) was found.

Statistical analysis was conducted to see if mean connectedness to nature differed between the groups: gender, age, sport type, disability, dependent children, and WHO physical activity guideline attainment.

Table 13. Mean connectedness to nature differed across variables

Groups	n =	Connection to Nature Score Mean (SD)
Gender*		
Female	594	63.51 (23.43)
Male	928	54.77 (22.48)
Age		
18-24	54	55.61 (23.74)
25-34	157	56.17 (20.50)
35-44	303	59.89 (23.33)
45-54	428	57.66 (23.27)
55-64	362	57.74 (23.71)
65+	223	60.95 (24.34)
Sport Type*		
Land	1049	56.82 (22.45)
Water	452	62.50 (24.87)
Disability		
Yes	105	61.36 (22.76)
No	1416	58.08 (23.25)
Dependent Children		
Yes	649	57.50 (22.24)
No	871	58.90 (23.98)
WHO Guideline Attainment*		
Met guideline	958	56.50 (22.90)
Did not meet guideline	563	61.53 (23.67)

*Indicates a significant difference

Connectedness to nature - gender

There was a significant difference in connectedness to nature with respect to gender with females scoring significantly higher than males.

Connectedness to nature - age

Age in years was split into 6 groups. There were no significant differences as a function of age.

Connectedness to nature - sport type

Sport type was split into two categories land sports and water sports. Water sports participants scored significantly higher in their nature connectedness.

Connectedness to nature - disability

There was no significant difference between people who identified as having a disability and people who did not for connectedness to nature.

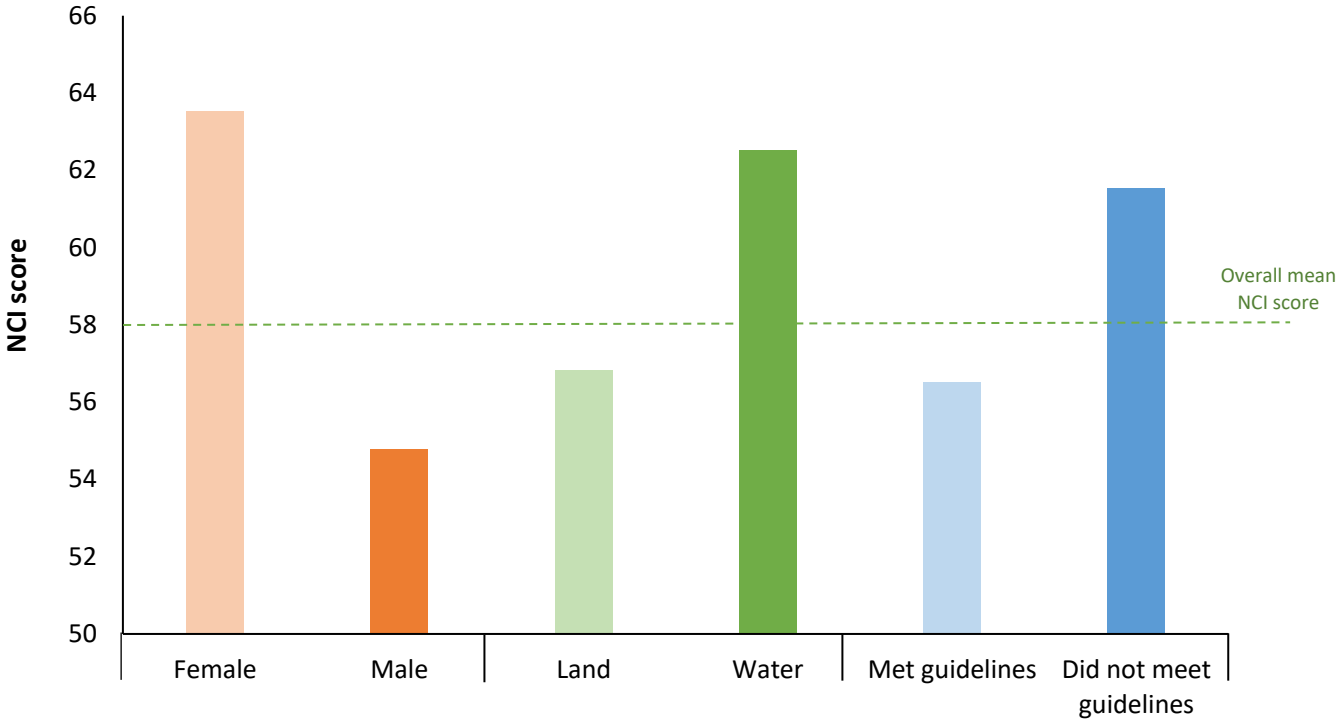
Connectedness to nature - dependent children

Individuals with no dependent children scored significantly higher in nature connection.

Connectedness to nature - physical activity WHO guideline attainment

Individuals who did not meet the WHO physical activity guideline from their main outdoor sport reported significantly higher connection to nature.

Figure 11. Significant differences in mean NCI scores for 'gender' (male vs female), 'sport type' (land vs water) and 'WHO physical activity guideline' (met vs not met).



Nature connection categorisation

To support the understanding of nature connection, in addition to scoring on a single scale, participants were classified into high, average, and low nature connections based upon the overall standard deviation.

Table 14. Classification of nature connection

Nature category	NCI score	Frequency n=	Percent
High nature connection	83-100	290	18.9%
Mid nature connection	36-82	933	60.9%
Low nature connection	0-35	310	20.2%

Physical activity guideline attainment through main sport

To understand physical activity levels Chi-square analysis was conducted to explore the associations between different groups and their physical activity attainment level. Additionally, for those with significant associations, odds ratio testing was conducted to see the probability of an outcome (i.e., attaining the WHO physical activity guideline) occurring in one group (e.g., females) compared with the odds of it happening in another (e.g., males)[12].

Table 15. Physical activity guideline attainment through main sport participation grouped by gender, age, sport type, disability, dependent children and Nature connection.

Group	Met guideline n=	Did not meet guideline n=
Gender		
Female	356	241
Male	607	327
Age		
18-24	38	15
25-34	97	60
35-44	192	112
45-54	278	153
55-64	233	134
65+	132	92
Sport Type*		
Land	746	307
Water	200	255
Disability		
Yes	57	49
No	910	514
Dependent Children		
Yes	419	237
No	545	328
Nature connection category*		
High	116	141
Mid	589	337
Low	203	85

*Indicates a significant difference

[12] Odds ratio testing can only be run for categories with two groups.

Physical activity guideline attainment - age, gender, sport participation type, disability, dependent children, and nature connection

Physical activity guideline attainment was explored against age, gender, sport participation type, disability, dependent children, and nature connection.

Guideline - gender

The percentage of females who met the WHO physical activity guideline through only their main outdoor sport was 59.63% (n=356), for males this was 64.99% (n=607). There was no significant association between gender and WHO physical activity guideline.

Guideline - age

The age group with the highest percentage of participants who attained the WHO physical activity guideline was 18-24-year-olds, while the 65+ group featured the lowest percentage of participant attainment. There was no significant association between age category and WHO physical activity guideline.

Table 16. Percentage of participants meeting WHO physical activity guideline when grouped by age.

Age group	Met guideline		Did not meet guideline	
	%	n	%	n
18-24	71.70%	38	28.30%	15
25-34	61.78%	97	38.22%	60
35-44	63.16%	192	36.84%	112
45-54	64.50%	278	35.50%	153
55-64	63.49%	233	36.51%	134
65+	58.93%	132	41.07%	92

Guideline - sport type

Sport type was split into two categories; land sports and water sports. Those who participated in a land sport were significantly more likely to reach the physical activity guideline than those who participated in a water sport. Odds ratio testing indicated that those participating in outdoor land sports were three times more likely than water sport participants to attain the WHO physical activity guideline.

Guideline - disability

There was no significant association between disability status and WHO physical activity guideline.

Guideline - dependent children

There was no significant association between child dependency status and WHO physical activity guideline.

Guideline - Connectedness to nature

Those who did not meet the WHO physical activity guideline from their main outdoor sport held a higher connection to nature. There was a significant association found in that those with a high nature connection were more likely to not reach the WHO physical activity guideline.

Table 17. Nature connection and WHO physical activity guideline attainment percentages

Nature category	Met guideline		Did not meet guideline	
	%	n=	%	n=
High nature connection	7.89%	116	9.59%	141
Mid nature connection	40.04%	589	22.91%	337
Low nature connection	13.80%	203	5.78%	85

Wellbeing

To understand wellbeing levels, participants were asked to complete the World Health Organisation- Five Well-Being Index (WHO-5). The WHO-5 is a short, 5 item, self-reported measure of current mental wellbeing (specifically referring to subjective psychological wellbeing). Scores range between 0 and 100, where 0 represents the worst imaginable wellbeing and 100 represents the best imaginable wellbeing. A score of ≤50 indicates poor wellbeing and suggests further investigation into possible symptoms of depression, and a score of 28 or below is indicative of depression. A mean score of 62.12 (SD=19.1) was reported, with 25% of all participants scores found to be within either the 'poor wellbeing' or 'indicative of depression' categories (Figure 12).

Figure 12. WHO-5 short wellbeing categories

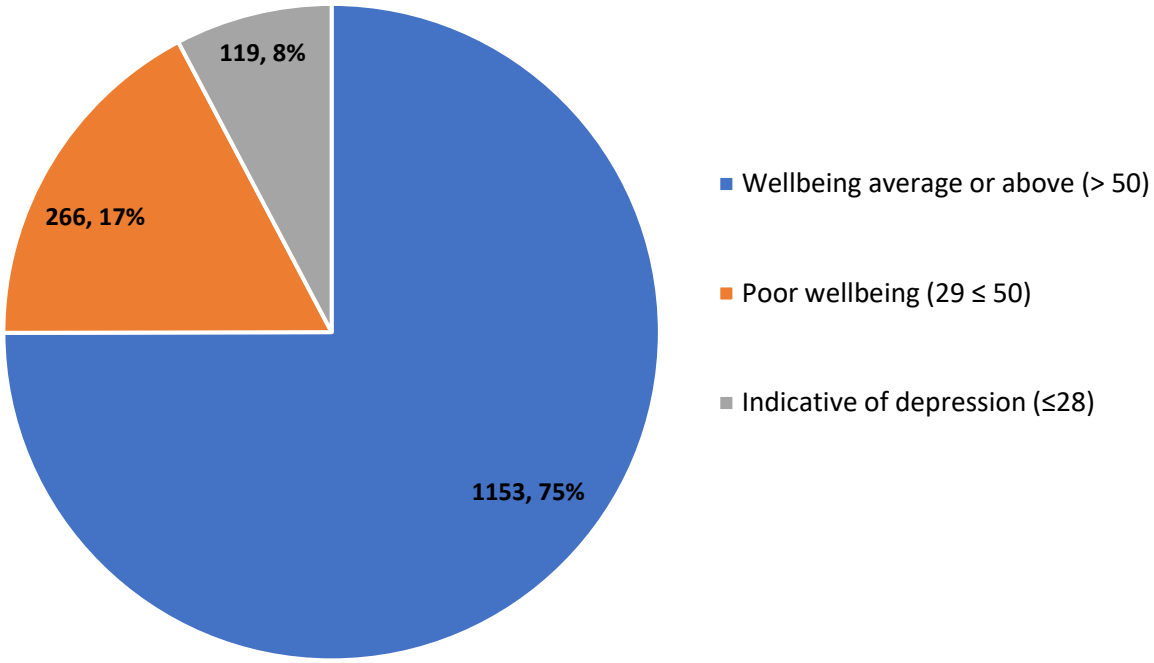


Table 18. Wellbeing scores (WHO-5) grouped by gender, age, sport type, disability, child dependency and WHO physical activity guideline attainment.

Group	n	WHO-5 Short Score Mean (SD)
Gender		
Female	596	60.77 (19.36)
Male	931	62.99 (18.78)
Age*		
18-24	54	62.44 17.31
25-34	156	58.64 18.63
35-44	303	58.98 21.02
45-54	430	61.66 18.80
55-64	366	65.76 17.20
65+	224	65.13 19.25
Sport Type*		
Land	1050	63.02 (18.44)
Water	454	59.01 (20.45)
Disability*		
Yes	105	52.34 (24.78)
No	1421	62.89 (18.41)
Dependent Children		
Yes	653	62.50 (19.23)
No	873	61.92 (18.89)
WHO Guideline Attainment*		
Met guideline	967	63.50 (18.29)
Did not meet guideline	558	59.79 (20.24)

* Indicates a significant difference

Wellbeing score - gender, age, sport participation type, disability, dependent children, WHO guideline attainment, and nature category

Statistical analysis was conducted to see whether wellbeing differed between gender, age, sport participation type, disability, dependent children, WHO guideline attainment, and nature category.

Wellbeing - gender

A majority of both females and males were found to score above the 50 threshold on the WHO-5, with no significant difference between wellbeing scores as a function of gender.

Wellbeing - age

Age in years was split into 6 groups with the mean for all groups being above 50 on the WHO-5 scale with those aged over 55 scoring the highest.

Table 19. Wellbeing scores (WHO-5) by age

Age group	n	Wellbeing WHO-5 Mean	SD
18-24 years	54	62.44	17.31
25-34 years	156	58.64**	18.63
35-44 years	303	57.98**	21.02
45-54 years	430	61.66*	18.80
55-64 years	366	65.76	17.20
65 years and over	224	65.13	19.25

Significant differences were found between groups:

- *significantly lower than 55 to 64;
- **significantly lower than 55 to 64, and 65+;

Figure 13: Graph demonstrating WHO-5 wellbeing score and participant age

Wellbeing - sport type

Sport type was split into two categories; land sports and water sports. Those who participated in land sport scored significantly higher for wellbeing than those who participated in water sports.

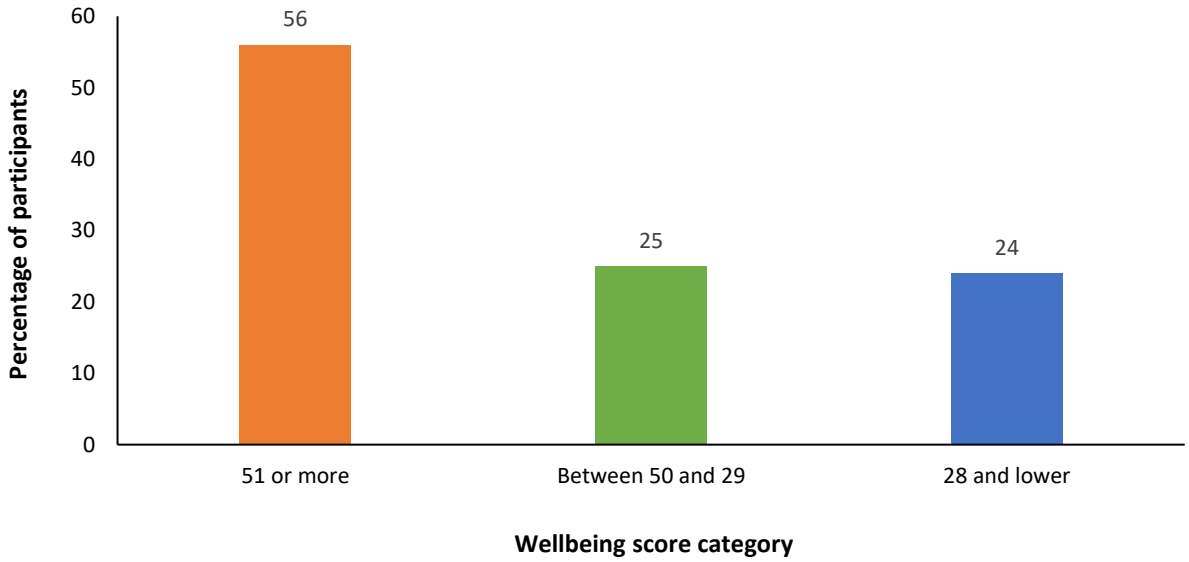
Table 20. Wellbeing scores (WHO-5) by sport type

Sport type	Wellbeing WHO-5 Mean	Wellbeing WHO-5 SD
Land	63.02	18.44
Water	59.91	20.45

Wellbeing - disability

Participants were split into two groups; individuals who identified as having a disability and individuals who did not. Individuals identified as having a disability scored significantly lower for wellbeing (52.34; SD=24.78) than individuals who did not (62.89; SD=18.41). The mean WHO-5 score for those with a disability was close to the threshold for poor wellbeing (≤50).

Figure 14. Wellbeing category (WHO-5) and disability



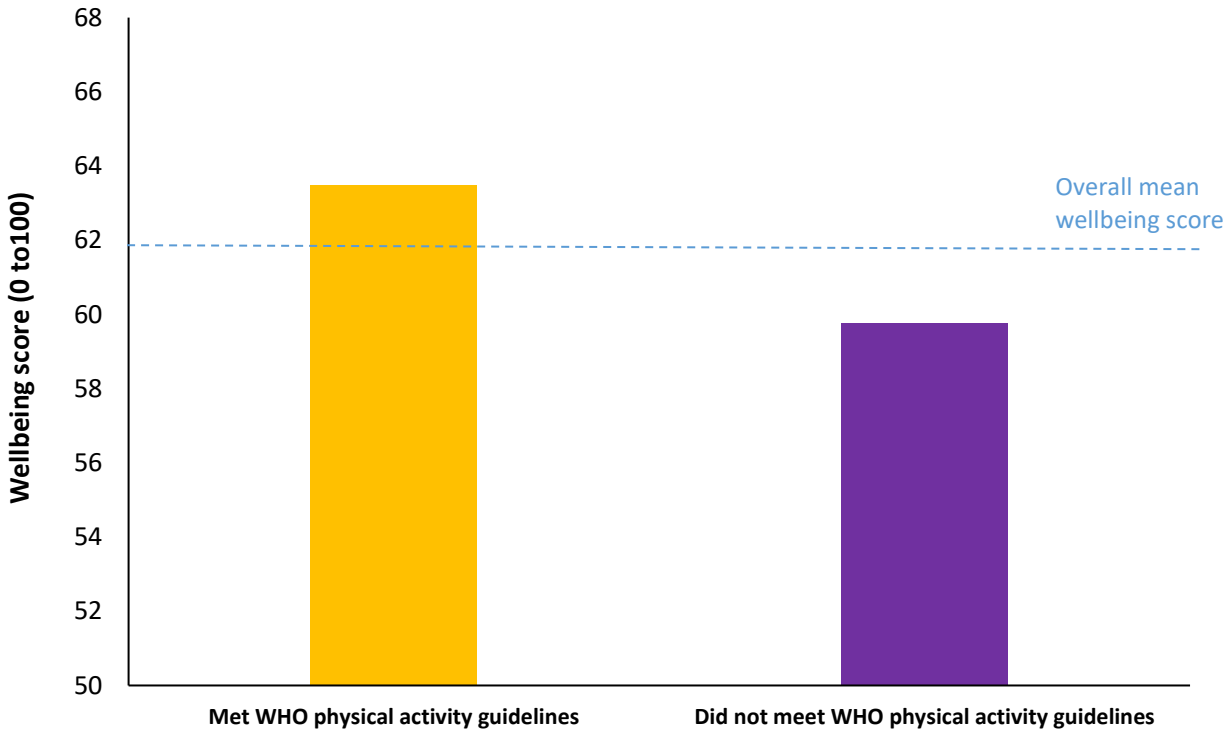
Wellbeing - dependent children

There was no significant difference in wellbeing for those who had or did not have dependent children.

Wellbeing - Attainment of the WHO physical activity guideline

Individuals who met the WHO guideline for physical activity were found to score significantly higher in their wellbeing (M=63.5, SD=18.29) than individuals who did not (M=59.78, SD=20.24).

Figure 15. Wellbeing category (WHO-5) and WHO physical activity guideline attainment



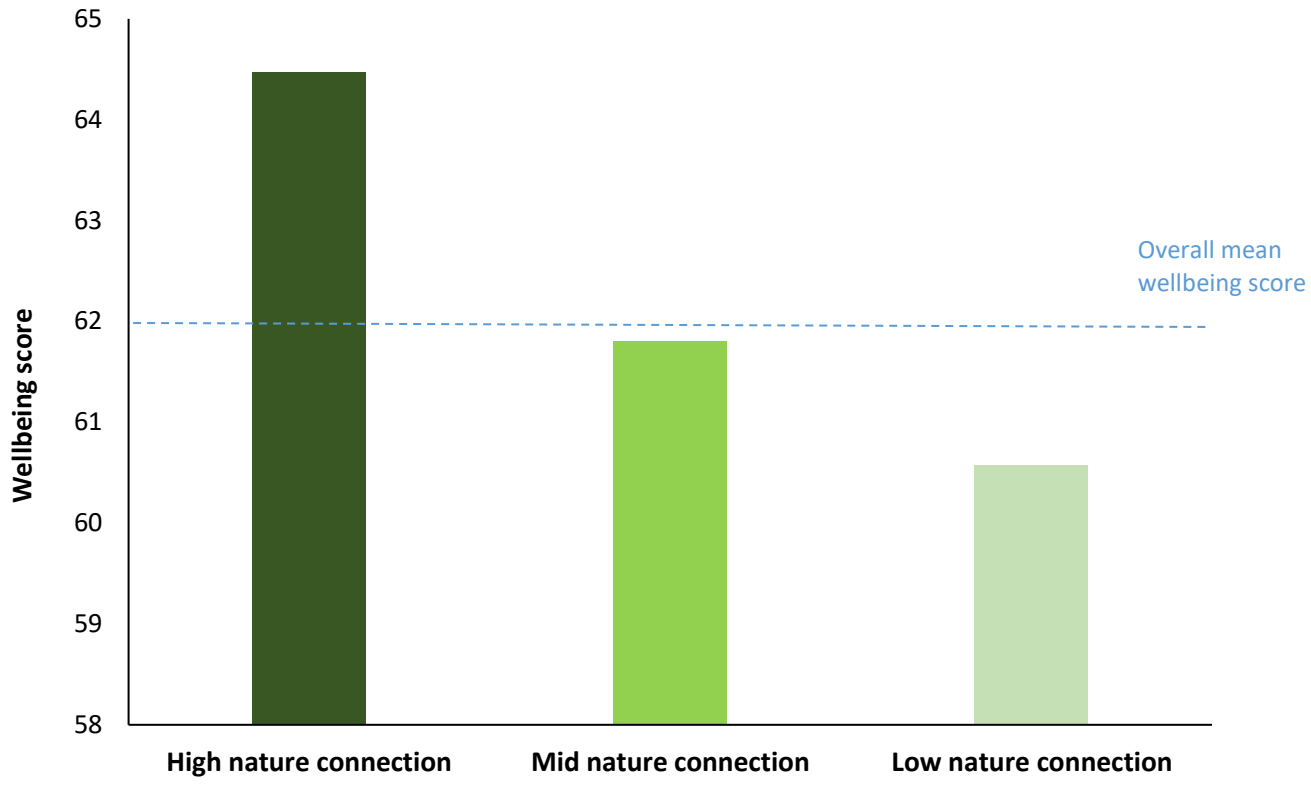
Wellbeing vs nature connection

Using regression analysis, it was found that nature connection score positively predicted participants score on the WHO-5. This was, however, only for a very low amount (accounting for approximately 1%). Additionally, those individuals who were categorised into the high nature connection group scored significantly higher in the WHO wellbeing score than those categorised as having low nature connection.

Table 21. NCI nature score as categories

Nature category	Frequency n=	Mean WHO-5 wellbeing	SD
High nature connection	307	64.47	19.74
Mid nature connection	925	61.8	18.88
Low nature connection	290	60.57	18.89

Figure 16. Nature connection group and wellbeing score (WHO-5)



Further wellbeing analysis

Following interpretations of the results, further analysis was conducted to better understand links between demographic details, physical activity levels, nature connection, and wellbeing. Upon examining wellbeing scores, lower scores were demonstrated amongst groups in the following categories: age, disability, and attainment of WHO physical activity guideline.

Age: Of the individuals aged between 25-34 years, significantly more than expected were in the low wellbeing group. Of the individuals aged between 35-44 years, significantly more than expected were in the groups having poor wellbeing scores and potential depression scores.

Disability: Those who identified as having a disability (physical, psychological, and/or learning) scored significantly lower for wellbeing than those who did not. Further, the mean score for those with a disability was 52.34 out of 100 thus being close to a score of 50 which is considered poor wellbeing. Furthermore, more people with a disability than expected were in the poor wellbeing and potential depression groups.

Physical activity guideline attainment: For the individuals identified as not reaching the WHO physical activity guideline through their main outdoor sport, more than expected were in the poor wellbeing and potential depression groups.

DISCUSSION

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Discussion

In concluding the fourth consecutive year of the e-survey, there were a total of 1556 responses between 2021-2024. Approximately 10% of participants completed the survey on two or more occasions. Analysis showed that 76.5% of participants were outdoor sport club members, aged between 18 and 90 years with a mean age of 50. Most participants identified as male 60.4% or female 38.7%, heterosexual 93%, of white ethnicity 98%, and of Irish 27.6%, British 25.3%, or Both 24.1% (British and Irish) nationalities. Additionally, 7% stated they had a disability, and 57% had dependent child(ren). With regards to outdoor sport participation, the most frequently cited main outdoor sport types were cycling (n=455), hiking (n=170), angling (n=139), and orienteering (n=121).

The following section provides an overview and discussion of the results from the outdoor sport participation survey in relation to physical activity, connection to nature, and mental health and wellbeing.

Physical activity

- For physical and mental health, the World Health Organization recommends that adults particate in at least 150 to 300 minutes of moderate, or 75 minutes of vigorous aerobic activity per week.
- The mean time individuals spent per week participating in their main outdoor sport was 5.77 hours (SD = 14.61 hours), and for all sport and physical activity was 8.66 hours (SD = 16.54 hours). Therefore, on average, time spent participating in their main outdoor sport accounted for 66.64% of all sport and physical activity completed by the participants.
- When exploring participation over the most recent seven-day period, the mean time an individual spent each day participating in their main outdoor sport ranged between 61.57 minutes and 131.85 minutes[13]. In comparison, a recent public health report found the average duration per day of physical activity of any form for individuals in Northern Ireland (n=1170) was 49.4 minutes (Sheehan & O'Sullivan, 2023). As such, this suggests that individuals who participate in outdoor sport and physical activity are more likely to attain higher levels of physical activity than the general population in Northern Ireland.

[13] Data was from 2022, 2023, and 2024

- The data presented suggests that 63% (n=971) of participants reached the WHO guideline of at least 150 to 300 minutes of moderate, or 75 mins vigorous aerobic activity per week from just their main outside sport. In comparison, the Northern Ireland Continuous Household Survey (2016/17) found only 40% of adults from the general population participated in 150 minutes or more of sport per week[14].
- Results showed that the number of individuals meeting the WHO physical activity guideline were similar when compared across age groups, genders, disability status, and dependent children status. Therefore, outdoor sport may offer opportunities for a variety of different people to meet the physical activity guideline regardless of their demographic profile. This consistent level of meeting the guideline from taking part in outdoor sport is not representative of the findings from the general population.
- Findings relating to the reasons for outdoor sport participation are multiple and include combinations of mental, physical, and social health benefits, and nature-based reasons, with no significant differences found across different age groups.
- Approximately 40% of participants (n=387) stated they had experienced an issue regarding access to the natural environment when participating in outdoor sport. The most frequently cited reason for access issues were a due to 'No trespassing or refused access by landowners' and a 'Lack of or limited access to suitable locations for activities'.

Natural environments

- Spending over 120 minutes per week in nature is associated with good health and wellbeing (White et al., 2019). On average participants in this study achieved this, with time spent participating in their main outdoor sport being approximately 350 minutes per week, and around 500 minutes per week for all outdoor sport and physical activity. It should be noted that the time spent in natural environments in this study was calculated based upon self-reported outdoor sport and physical activity alone. If other non-sporting activities were to be included (e.g., arts in nature) this may have been higher. The time spent in nature is notably higher in this study, than the amount per week thought to be associated with good health and wellbeing. Seventy six percent of participants indicated that they were members

[14] Please note that different definitions and methods of collection were used and therefor this figure should be used as a guide rather than a direct comparison.

of outdoor sport clubs, which may account for differences when compared with values reported in relation to the general population. As well as three quarters of all participants in this study being club members, the level of outdoor sport proficiency reported may also be a factor with respect to the high proportion of time spent per week in nature. An overwhelming majority of approximately 1,300 participants indicated that they were competent in moderate to advanced conditions (709 and 597 respectively). Again, this is not representative of the general population.

- The mean nature connectedness score (58.39) aligns with previous research that explored nature connection in England with a sample of approximately 5000 adults having a mean score of 60.12 (Martin et al., 2020).
- Experiencing nature was the third most important motivation for both females and males in terms of reasons for participation in outdoor sport. There was however a significant difference between females and males level of agreement scores, with females' values being significantly higher than males for this motivation. Similarly, when exploring nature connectedness, it was found that females were significantly more connected to nature than males. Regarding sport type, those who participated in water sports were significantly more motivated by the '*experience of nature*' and the '*scenery/ landscape'*, and those who participated in water sports were significantly more connected to nature.
- Individuals who did not have dependent children and those who did not meet the WHO guideline were both more connected with nature than those that did. An explanation for the higher levels of nature connection for those not reaching the WHO physical activity guideline may come from their motivation scores. Individuals who did not reach the WHO physical activity guideline through their main sport were significantly less motivated by the following reasons for participation: the physical challenge, for the physical health, and to achieve a goal. However, they were significantly more motivated by the scenery/landscape as a reason for participation. Therefore, it appears that the importance of the physical activity was placed below experiencing nature.
- Water sport participants were found to have a greater association with the natural environment in comparison to those participating in land-based sports. This greater association was demonstrated in the higher connection to nature scores reported by participants citing water-based activities as their main sport. Further, they also scored

higher in '*experience of nature*' and the '*scenery/ landscape*' as reasons for participation. This greater connection to nature and emphasis on importance of nature, landscape, and scenery as motivation for participation may be as a result of taking part in water sports, or due to water sports being particularly appealing for those who feel or desire a greater connection to nature.

Mental health and wellbeing

- Reflecting global population level wellbeing scores, twenty five percent of the participants scored in the poor wellbeing or potential depression category. Overall, the mean score for outdoor sport participants in Northern Ireland was 62.12 (SD=19.1), significantly above the low wellbeing threshold (a score of 50 or lower).
- Participants aged over 55 years had the highest scores for wellbeing with mean scores above 65 in the age groups *'55 to 65'* and *'65+'*. Additionally, people who met the WHO guideline for physical activity through their main outdoor sport scored significantly higher for wellbeing than people who did not.
- The highest scored reason for outdoor sport participation was for mental health. Participating in outdoor sport for mental wellbeing was particularly important for those with a disability and those with dependent children.
- Outdoor sports enabled most of the participants (n=1306; 83.99%) to experience competence in moderate or advanced conditions in relation to their main outdoor sport. Experiencing competence in sport has been linked to continued sport participation (Zhang & Miao, 2024) and levels of mastery linked to key dimensions responsible for a person's wellbeing (Ryff, 1989).
- Wellbeing scores indicated that people with a disability and adults aged between 25-44 years may be at particular risk of low wellbeing and/or depression.

RECOMMENDATIONS

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Recommendations

Based upon the project findings, recommendations are presented in three areas;

1. Recommendations which Sport Northern Ireland could use in an aim to support the sector;
2. Recommendations for National Governing Bodies (NGB) to further support their members; and finally,
3. Future research recommendations.

Sport Northern Ireland

Facilitate lifelong engagement in outdoor sport

People participated in outdoor sports throughout their adult life with ages in the current study ranging from 18 up to 90 years. In addition, the associated physical activity and wellbeing benefits of outdoor sport were relatively stable regardless of age. As such, outdoor sport has the potential to benefit individuals at different stages of their life and counter the reduced physical activity levels in older adults in Northern Ireland (see Sheehan, & O'Sullivan, 2023). Therefore, the promotion of outdoor sport should ensure that it is targeted and accessible for all ages.

Mental health and wellbeing focus

Certain individuals and/or groups may particularly benefit from outdoor sport participation for mental wellbeing, while for others it can be the main reason for their participation. As such, promoting the mental health and wellbeing benefits of outdoor sport alongside other benefits is encouraged. Such promotion of wellbeing can be aided through collaborations with national and local public health and wellbeing teams/specialists.

Outdoor sport and physical activity for social prescribing

Outdoor sport and physical activity provide a unique opportunity in supporting people's physical and mental health simultaneously through physical movement and exposure to the natural environment. Additionally, outdoor sports and physical activity includes diverse activities (e.g., hiking, cycling, wild swimming) that take place in varied environments (e.g.,

green and/or blue spaces). Therefore, Sport Northern Ireland are well placed to support social prescribing through outdoor sport and physical activity via a range of activities in different outdoor environments.

United Nations Sustainable Development Goals

The United Nations Sustainable Development Goals (UNSDG, 2015) aim to build an inclusive, sustainable, and resilient future for people and the planet. The goals that are of particular relevance here are UNSDG3-good health and wellbeing, and UNSDG13-climate action. Through the further promotion and facilitation of outdoor sports, Sport Northern Ireland can continue and further support these goals.

Results demonstrate the positive influence outdoor sport has upon individuals' physical health and wellbeing because of their engagement in frequent physical activity, and attainment levels of the WHO physical activity guideline.

Participants with different demographic profiles showed a consistent high level of connection with nature. Connection with nature has been linked to conservation of natural environments (Barrows et al., 2022). Therefore, outdoor sport participants may be particularly interested in supporting climate action.

National Governing Bodies

Consultations

While the motivations for participation in outdoor sport were relatively high across all reasons for participation, there were certain groups which scored higher for specific motivations. Therefore, meaningful consultation and engagement with participants may help to better understand their motivations for participation in specific outdoor sports. Findings from consultations may aid in the development of outdoor sports, and the subsequent recruitment and retention of participant numbers.

Peer support

Overall, the main motivation for participating in outdoor sport was for mental wellbeing. Peer support is an approach which has been associated with continued sport participation, positive mental wellbeing outcomes, and can help buffer against the negative effects of poor mental health (see Kinnafick et al., 2025; Shalaby & Agyapong, 2020). As such, the development of peer support / mentoring programmes for outdoor sport should be considered.

Additional support for people at risk of low wellbeing

Some individuals who participate in outdoor sport may be at a greater risk of low levels of wellbeing. Findings from the current study highlight individuals at risk to be aged under 45, people with a disability, and those who did not meet the WHO physical activity guideline. Additionally, individuals taking part in water sports demonstrated lower levels of wellbeing. As such, relevant NGBs should consider: (i) providing staff with mental health and wellbeing training (e.g., Mental Health First Aid), (ii) assigning mental health and wellbeing leads / champions who are responsible for raising awareness of mental health, challenging stigma, and signposting to relevant support (see Mind, 2015), and (iii) sign posting, being sure to have clear and accessible information about relevant mental health and wellbeing services.

Specific sport and physical activity promotion for women and girls

In the current study females scored particularly highly for nature connectedness, which has been linked reduced anxiety (Chang et al., 2024) and were found to be significantly more motivated to participate in outdoor sport for the purpose of experiencing nature. Recent reports have shown that females in Northern Ireland are less likely to take part in sport than males (see 2019-20 NISRA Continuous Household Survey 2020). Furthermore, recent findings from Northern Ireland Statistics and Research Agency (2020) reported significantly higher anxiety scores for females in the general population than in previous years. As such, targeted events for women which focus upon connectedness to nature may be beneficial in seeking to engage women in outdoor sport and support positive mental health and wellbeing outcomes.

Club membership flexibility

To engage with people who are not currently members of NGB's, but participate in outdoor sport, NGB's could look to explore flexible membership approaches such as seasonal membership, causal/associate memberships, and concessionary schemes.

Nature and conservation

Due to the high levels of connection to nature held by participants, and desire to take part in outdoor sport to experience nature, NGB's could, where possible seek to engage their members in conservation opportunities. All conservation work should align with the United Nation Sustainable Development Goals and relevant Northern Ireland and UK acts (e.g., Environment Act 2021). Additionally, NGB's should consider recent research regarding conservation in sport which suggests areas such as:

(i) organisational measures (e.g., monitoring of water quality and the establishment of criteria for closing bodies of water);

(ii) increased climate related education to all individuals involved in outdoor sport;

(iii) increased campaigning for preventative measures (e.g., climate friendly training facilities, water conserving sporting facilities) and,

(iv) the evaluation of any climate related interventions (see Schneider et al., 2024).

Future research

Qualitative inquiry

Future qualitative research (e.g., interviews, focus groups) could lead to gaining a better understanding of context specific experiences of outdoor sport participation and further exploration into the reasons for/barriers to outdoor sport participation. Such an approach could also provide further insight and possible explanations for relationships found in this report such as why water sports participants reported lower levels of wellbeing. Additionally, a case study method has the potential to better understand lived experiences and motivations of different individuals who participate in specific sports.

Longitudinal approach

Longitudinal research tracking specific individuals would enable better understanding of changes through the life course/over time in outdoor sport participation, wellbeing, connectedness to nature and other variables. Additionally, longitudinal research offers greater opportunities for comparisons across different sports and demographic profiles.

Targeted recruitment

The majority of participants in the current research identified as white and heterosexual; therefore, to enhance outdoor sport for all, future research is required to better understand experiences of individuals from different and varied backgrounds/orientations. Such research would also support the goal from the Active Living Sport and Physical Activity Strategy for Northern Ireland in promoting participation, inclusion, and community engagement (see Department for Communities, 2022).

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Appendices

Sport NI - 2021 Outdoor Sport Report - CAWR.pdf

Sport NI - 2022 Outdoor Sport update report CAWR.pdf

Sport NI - 2023 Outdoor Sport update report CAWR.pdf

Sport NI - 2024 Outdoor Sport update report CAWR.pdf

Citation: Sellars, P. A., Crone, D., Moll, T., & Dickson, T. (2025). Understanding outdoor sports participants' motivations, connectedness to nature, and wellbeing in Northern Ireland: Full report. Centre for Health, Activity and Wellbeing Research, Cardiff Metropolitan University, UK.

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