

Technical Report

Contributing to the Active Scotland Outcomes Framework

June 2020

Clubs Survey

[UNION DATA]

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Introduction

This technical report is based on the results of surveys carried out by **sportscotland** and Sports Governing Bodies (SGBs) to understand **sportscotland**'s contribution to the Active Scotland Outcomes Framework (ASOF)¹. ASOF is the Scottish Government's policy framework for delivering a more active Scotland. This framework defines the Scottish Government's key goals and targets for sport and physical activity over the next decade.

Responses

The club survey is made up from data from two primary sources. These were the Supported Club Survey and surveys conducted by Sports Governing Bodies (SGBs). The SGB surveys were distributed by the governing bodies to their members. Surveys were completed via SurveyMonkey and the responses collected from December 2019 to March 2020. In total, 10,971 sports participants responded to the club surveys.

Table 1 below shows the responses for each survey. This indicates that around half (49.6%) of surveys were received via the Supported Club Survey while around another half (48.1%) came from SGB surveys. The largest of these SGB surveys were Swimming (1,063 responses, 9.5% of total) and Gymnastics (1,042 responses, 9.3% of total).

A further source of data was the Schools Survey that was run concurrently. This data was used to supplement the Under 18 (Junior) data where there were insufficient sport responses to weight the data robustly (Golf, Snowsport, Tennis, Taekwondo, Cricket, Table Tennis, Ju-Jitsu, Squash and Football). These were only included where the Schools Survey respondents were also sports club members. This additional sample of 254 respondents makes up 2.3% of the total respondents.

Survey Source	n	%
sportscotland Supported Club Survey	5,571	49.63%
Sports Governing Body (SGB) Surveys		
Archery	356	3.17%
Athletics	435	3.88%
Badminton	211	1.88%
Basketball	132	1.18%
Bowls	402	3.58%
Canoeing	130	1.16%
Cycling	1	0.01%
Equestrian	77	0.69%
Football	361	3.22%
Golf	316	2.82%
Gymnastics	1,042	9.28%
Netball	126	1.12%
Rugby Union	553	4.93%
Shinty	9	0.08%
Squash	176	1.57%
Swimming	1,063	9.47%
Tennis	10	0.09%
Subtotal SGB	5,400	48.11%
Additional Data Source		
Supplemental Data from Schools Survey	254	2.26%
Total	11,225	100.00%

Table 1: Survey Data Sources

¹ See <http://www.gov.scot/About/Performance/scotPerforms/partnerstories/Outcomes-Framework>

In Table 2 (below), the totals for each major sport are shown as well as the survey numbers by Under 18 and Over 18 respondents. For the SGB surveys, the SGB sport has been used. However, the responses to the **sportscotland** survey were open-ended. Therefore, it was necessary to 'clean' the sport names. Due to the open-ended question design, some respondents to the **sportscotland** survey did not supply a sport. In cases where the sport was missing, this was often possible to impute from a supplied sports club name. However, 719 respondents were unable to be assigned to a sport. Where sports did not have a high number of responses, these have been grouped together as 'Other Sports'.

Table2: Final Responses by Major Sports and Age Group

Sport	Under 18	18 or over	Total Sport	% of Total
Aerobics And Fitness	2	45	47	0.42%
American Football	2	28	30	0.27%
Archery	23	355	378	3.37%
Athletics	132	630	762	6.79%
Badminton	51	181	232	2.07%
Basketball	177	177	354	3.15%
Bowls	10	438	448	3.99%
Boxing	51	208	259	2.31%
Canoeing	4	164	168	1.50%
Cheerleading	15	19	34	0.30%
Cricket	18	48	66	0.59%
Curling	4	149	153	1.36%
Cycling	59	300	359	3.20%
Dance	15	24	39	0.35%
Disability Sport	0	24	24	0.21%
Equestrian	7	98	105	0.94%
Fencing	12	30	42	0.37%
Football	236	605	841	7.49%
Golf	21	435	456	4.06%
Gymnastics	666	499	1,165	10.38%
Hockey	22	114	136	1.21%
Ice Hockey	22	27	49	0.44%
Ice Skating	10	51	61	0.54%
Ju-Jitsu	2	22	24	0.21%
Judo	107	178	285	2.54%
Karate	31	87	118	1.05%
Martial Arts	2	14	16	0.14%
Muay Thai	3	28	31	0.28%
Netball	54	259	313	2.79%
Orienteering	5	109	114	1.02%
Rambling	0	27	27	0.24%
Roller Derby	0	21	21	0.19%
Rowing	26	151	177	1.58%
Rugby Union	70	701	771	6.87%
Sailing	0	15	15	0.13%
Scuba Diving	0	10	10	0.09%
Shinty	9	46	55	0.49%
Shooting	0	10	10	0.09%
Snowsport	21	27	48	0.43%
Squash	10	174	184	1.64%
Swimming	583	674	1,257	11.20%
Table Tennis	6	61	67	0.60%
Taekwondo	69	36	105	0.94%
Tennis	62	203	265	2.36%
Trampoline	51	25	76	0.68%
Triathlon	10	172	182	1.62%
Volleyball	19	35	54	0.48%
Weightlifting	3	23	26	0.23%
Other Sports	7	40	47	0.42%
Not Stated	152	567	719	6.41%
Total	2,861	8,364	11,225	100.00%

Table 2: Final Responses by Major Sports and Age Group

Survey Design

The questionnaire, whether collected directly via **sportscotland** or by the SGB, followed identical designs with the exception of the archery survey. This version contained questions specific to archery albeit with some correspondences to the standard design.

Within the survey, there were three sets of questions. These were designed specifically for different age groups. The question sets included an adult version for those aged 18 or over, a youth survey for those aged 13-17 years old and a child survey for those aged 8-12 years old. Notably, the child and youth surveys had very similar question sets with some questions omitted or simplified for children compared to the youth version of the survey. Furthermore, the adult survey contained many questions in common with the youth and child surveys.

It should be noted though that, even where outcomes for responses are similar, the age specific question sets are designed to capture different measurements. For example, physical activity levels are calculated differently for adults and children while questions around sensitive issues such as disability are asked differently to adults compared to children. In the case of physical activity, this meant an entirely different set of questions was used to calculate activity levels.

Survey Weighting

Part of the requirement to produce the survey results was the use of a weighting. This was specified to be reflective of the membership of the SGBs. For this purpose, a membership list was collated showing the SGB membership by age and gender.

A version of this list is shown on Table 3 on the following page. Note that where the membership of some SGBs was low or incomplete, these were collated into the 'Other Sport' category. The percentages shown in the last four columns of the table are calculated as percentages of each sport and gender by junior and adult membership. As a result, when the percentages for each gender and sport are added for all combinations, the sum is 100%. Additional figures for the percentages of males and females by junior and adult as well as the percentage of junior versus adult overall are shown in the bottom two rows.

Notably, when the memberships of these SGBs are added together by gender, at a junior level there is roughly a 2/3:1/3 split between male and female members. At an adult level, this difference is even more pronounced with over 76% of members being male and only 24% female. Thus, sports club membership, especially at an adult level, is dominated by males.

However, it should be noted that these figures are not direct indicators of sports participation per se. For example, these figures will not include those taking part in non-SGB club activities such as most aerobics classes, yoga, gym memberships, exercise at home or non-competitive types of running such as jogging. It is entirely possible that these activities have gender biases of their own that will not be measured in club membership statistics. Therefore, the membership list is not a comprehensive list of those engaging in sporting activity but is, instead, exclusively made up of SGB sport club memberships. For this reason, it may not be a good indicator of sports participation by gender in general.

Table3: sportscotland Counts and Percentages of Club Members

Sport	Junior <i>n</i>		Adult <i>n</i>		Junior %		Adult %	
	Female	Male	Female	Male	Female	Male	Female	Male
Archery	458	748	622	1,178	0.06%	0.10%	0.08%	0.16%
Athletics	4,629	4,312	4,164	5,696	0.62%	0.57%	0.55%	0.76%
Badminton	1,132	2,635	1,282	2,352	0.15%	0.35%	0.17%	0.31%
Basketball	1,771	3,668	710	2,027	0.24%	0.49%	0.09%	0.27%
Bowls	654	982	16,636	41,293	0.09%	0.13%	2.21%	5.49%
Boxing	154	1,192	1,085	3,028	0.02%	0.16%	0.14%	0.40%
Canoeing	433	679	1,260	1,654	0.06%	0.09%	0.17%	0.22%
Cricket	240	6,050	200	5,200	0.03%	0.80%	0.03%	0.69%
Curling	347	555	3,800	6,721	0.05%	0.07%	0.51%	0.89%
Cycling	504	2,219	1,673	7,370	0.07%	0.29%	0.22%	0.98%
Disability Sport	.	.	153	222			0.02%	0.03%
Fencing	152	272	206	332	0.02%	0.04%	0.03%	0.04%
Football	10,320	74,539	2,136	44,181	1.37%	9.91%	0.28%	5.87%
Golf	2,597	12,917	21,364	143,403	0.35%	1.72%	2.84%	19.06%
Gymnastics	23,908	4,192	1,790	379	3.18%	0.56%	0.24%	0.05%
Hockey	3,880	2,479	2,888	2,584	0.52%	0.33%	0.38%	0.34%
Ju-Jitsu	18	48	12	52	0.00%	0.01%	0.00%	0.01%
Judo	2,211	4,872	251	1,051	0.29%	0.65%	0.03%	0.14%
Karate	4,537	7,121	1,035	1,955	0.60%	0.95%	0.14%	0.26%
Netball	3,013	7	3,605	19	0.40%	0.00%	0.48%	0.00%
Orienteering	303	409	552	656	0.04%	0.05%	0.07%	0.09%
Rowing	681	673	836	993	0.09%	0.09%	0.11%	0.13%
Rugby Union	1,533	16,861	2,239	16,735	0.20%	2.24%	0.30%	2.22%
Scuba Diving	.	.	184	806			0.02%	0.11%
Shinty	528	1,220	394	1,306	0.07%	0.16%	0.05%	0.17%
Shooting	.	.	304	1,862			0.04%	0.25%
Snowsport	1,092	1,572	1,289	2,102	0.15%	0.21%	0.17%	0.28%
Squash	506	1,016	1,084	4,355	0.07%	0.14%	0.14%	0.58%
Swimming	7,536	5,160	6,798	3,430	1.00%	0.69%	0.90%	0.46%
Table Tennis	47	270	113	1,067	0.01%	0.04%	0.02%	0.14%
Taekwondo	5,505	7,196	2,168	3,059	0.73%	0.96%	0.29%	0.41%
Tennis	9,838	14,124	15,274	18,258	1.31%	1.88%	2.03%	2.43%
Triathlon	407	384	1,492	2,083	0.05%	0.05%	0.20%	0.28%
Volleyball	365	371	510	513	0.05%	0.05%	0.07%	0.07%
Other Sports	2,989	4,520	15,799	35,048	0.40%	0.60%	2.10%	4.66%
Total	92,288	183,263	113,908	362,970	12.27%	24.36%	15.14%	48.24%
% Female vs. Male					33.49%	66.51%	23.89%	76.11%
Overall Junior/Adult		275,551		476,878		36.62%		63.38%

Table 3: sportscotland Counts and Percentages of Club Members

Table 4 (below) shows the raw survey counts for the same sports excluding those where a sport was not stated. One major difference to the membership list is that the survey contained an additional option of 'prefer not to say' for gender. There were also a number of responses where this question had been left blank. In the adult survey, those who stated 'prefer not to say' or did not answer the question totalled $n=1,705$ of 7,797 respondents (almost 22% of respondents) while in the junior survey the total was $n=390$ of 2,709 respondents (around 14% of respondents).

Table 4: Unadjusted Counts and Percentages of Respondents by Sport, Gender and Junior/Adult (Excl. Sport Not Stated, Rounded to 1 D.P.)

Sport	Junior (Under-18)				Adult (18 or Over)				Junior (Under-18)				Adult (18 or Over)			
	Female	Male	Prefer not to say	Missing	Female	Male	Prefer not to say	Missing	Female	Male	Prefer not to say	Missing	Female	Male	Prefer not to say	Missing
Archery	7	12	1	3	96	196	8	55	0.3%	0.4%	0.0%	0.1%	1.2%	2.5%	0.1%	0.7%
Athletics	65	43	1	23	273	252	8	97	2.4%	1.6%	0.0%	0.8%	3.5%	3.2%	0.1%	1.2%
Badminton	11	27	1	12	54	80	1	46	0.4%	1.0%	0.0%	0.4%	0.7%	1.0%	0.0%	0.6%
Basketball	38	105	1	33	48	93	1	35	1.4%	3.9%	0.0%	1.2%	0.6%	1.2%	0.0%	0.4%
Bowls	1	2	0	7	88	205	2	143	0.0%	0.1%	0.0%	0.3%	1.1%	2.6%	0.0%	1.8%
Boxing	10	33	0	8	93	90	1	24	0.4%	1.2%	0.0%	0.3%	1.2%	1.2%	0.0%	0.3%
Canoeing	1	3	0	0	61	100	0	3	0.0%	0.1%	0.0%	0.0%	0.8%	1.3%	0.0%	0.0%
Cricket	3	14	1	0	4	32	3	9	0.1%	0.5%	0.0%	0.0%	0.1%	0.4%	0.0%	0.1%
Curling	1	3	0	0	61	78	1	9	0.0%	0.1%	0.0%	0.0%	0.8%	1.0%	0.0%	0.1%
Cycling	8	46	0	5	89	188	3	20	0.3%	1.7%	0.0%	0.2%	1.1%	2.4%	0.0%	0.3%
Disability Sport	0	0	0	0	7	14	1	2	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%
Fencing	4	8	0	0	14	14	1	1	0.1%	0.3%	0.0%	0.0%	0.2%	0.2%	0.0%	0.0%
Football	33	180	1	22	131	310	4	160	1.2%	6.6%	0.0%	0.8%	1.7%	4.0%	0.1%	2.1%
Golf	8	13	0	0	69	299	2	65	0.3%	0.5%	0.0%	0.0%	0.9%	3.8%	0.0%	0.8%
Gymnastics	529	42	3	92	258	29	5	207	19.5%	1.6%	0.1%	3.4%	3.3%	0.4%	0.1%	2.7%
Hockey	7	10	1	4	58	45	0	11	0.3%	0.4%	0.0%	0.1%	0.7%	0.6%	0.0%	0.1%
Ju-Jitsu	1	1	0	0	5	13	1	3	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%
Judo	41	60	0	6	52	98	0	28	1.5%	2.2%	0.0%	0.2%	0.7%	1.3%	0.0%	0.4%
Karate	11	18	1	1	40	37	1	9	0.4%	0.7%	0.0%	0.0%	0.5%	0.5%	0.0%	0.1%
Netball	48	0	0	6	222	1	0	36	1.8%	0.0%	0.0%	0.2%	2.8%	0.0%	0.0%	0.5%
Orienteering	1	3	0	1	48	58	1	2	0.0%	0.1%	0.0%	0.0%	0.6%	0.7%	0.0%	0.0%
Rowing	16	8	0	2	78	63	0	10	0.6%	0.3%	0.0%	0.1%	1.0%	0.8%	0.0%	0.1%
Rugby Union	8	41	0	21	74	366	2	259	0.3%	1.5%	0.0%	0.8%	0.9%	4.7%	0.0%	3.3%
Scuba Diving	0	0	0	0	4	6	0	0	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%
Shinty	4	3	1	1	18	19	0	9	0.1%	0.1%	0.0%	0.0%	0.2%	0.2%	0.0%	0.1%
Shooting	0	0	0	0	2	7	1	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
Snowsport	9	12	0	0	11	11	1	4	0.3%	0.4%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%
Squash	6	4	0	0	36	94	1	43	0.2%	0.1%	0.0%	0.0%	0.5%	1.2%	0.0%	0.6%
Swimming	282	186	2	113	249	163	4	258	10.4%	6.9%	0.1%	4.2%	3.2%	2.1%	0.1%	3.3%
Table Tennis	0	5	0	1	12	41	0	8	0.0%	0.2%	0.0%	0.0%	0.2%	0.5%	0.0%	0.1%
Taekwondo	33	34	2	0	17	16	1	2	1.2%	1.3%	0.1%	0.0%	0.2%	0.2%	0.0%	0.0%
Tennis	22	39	0	1	106	79	1	17	0.8%	1.4%	0.0%	0.0%	1.4%	1.0%	0.0%	0.2%
Triathlon	4	6	0	0	87	80	0	5	0.1%	0.2%	0.0%	0.0%	1.1%	1.0%	0.0%	0.1%
Volleyball	9	7	0	3	13	19	0	3	0.3%	0.3%	0.0%	0.1%	0.2%	0.2%	0.0%	0.0%
Other Sports	96	34	0	9	280	138	7	60	3.5%	1.3%	0.0%	0.3%	3.6%	1.8%	0.1%	0.8%
Total	1,317	1,002	16	374	2,758	3,334	62	1,643	48.6%	37.0%	0.6%	13.8%	35.4%	42.8%	0.8%	21.1%

Table 4: Unadjusted Counts and Percentages of Respondents by Sport, Gender and Junior/Adult (Excl. Sport Not Stated)

These omissions are important from a weighting perspective as all respondents require a weight. Typically, where missing values are less numerous, it is often possible to assign all missing responses to the most prevalent gender of their weighting group. However, due to the volume of responses missing in this instance, it was necessary to use a different methodology.

This methodology involved using the responses for each sport overall to estimate the likely gender split of responses where the gender was unknown. Due to low cell counts, especially at the junior level, the reassignment was calculated at the overall level i.e. junior and adult combined. Those who had not stated male or female were randomly assigned a gender for weighting purposes in line with the proportions of known gender responses for each sport overall.

Table 5 (below) shows the imputed genders of respondents following random assignment. Notably, the random assignments of gender are close to the known survey gender distributions. However, some variation remains as the random values chosen will not be exact replications of the known percentages due to the random assignment of genders – especially where there are low numbers in some sports.

Table 5: Survey Percentages of Male and Females by Sport: Known and Imputed (Excl. Sport Not Stated)

Sport	All Respondents (junior and adult)				Overall Known		Overall Imputed	
	Female	Male	Prefer not to say	Missing	Female %	Male %	Female %	Male %
Archery	103	208	9	58	33.12%	66.88%	33.86%	66.14%
Athletics	338	295	9	120	53.40%	46.60%	52.89%	47.11%
Badminton	65	107	2	58	37.79%	62.21%	38.79%	61.21%
Basketball	86	198	2	68	30.28%	69.72%	30.79%	69.21%
Bowls	89	207	2	150	30.07%	69.93%	30.80%	69.20%
Boxing	103	123	1	32	45.58%	54.42%	46.33%	53.67%
Canoeing	62	103	0	3	37.58%	62.42%	38.10%	61.90%
Cricket	7	46	4	9	13.21%	86.79%	12.12%	87.88%
Curling	62	81	1	9	43.36%	56.64%	45.75%	54.25%
Cycling	97	234	3	25	29.31%	70.69%	29.81%	70.19%
Disability Sport	7	14	1	2	33.33%	66.67%	29.17%	70.83%
Fencing	18	22	1	1	45.00%	55.00%	45.24%	54.76%
Football	164	490	5	182	25.08%	74.92%	24.14%	75.86%
Golf	77	312	2	65	19.79%	80.21%	18.64%	81.36%
Gymnastics	787	71	8	299	91.72%	8.28%	91.33%	8.67%
Hockey	65	55	1	15	54.17%	45.83%	55.15%	44.85%
Ju-Jitsu	6	14	1	3	30.00%	70.00%	29.17%	70.83%
Judo	93	158	0	34	37.05%	62.95%	37.19%	62.81%
Karate	51	55	2	10	48.11%	51.89%	51.69%	48.31%
Netball	270	1	0	42	99.63%	0.37%	99.36%	0.64%
Orienteering	49	61	1	3	44.55%	55.45%	44.74%	55.26%
Rowing	94	71	0	12	56.97%	43.03%	57.63%	42.37%
Rugby Union	82	407	2	280	16.77%	83.23%	16.34%	83.66%
Scuba Diving	4	6	0	0	40.00%	60.00%	40.00%	60.00%
Shinty	22	22	1	10	50.00%	50.00%	49.09%	50.91%
Shooting	2	7	1	0	22.22%	77.78%	30.00%	70.00%
Snowsport	20	23	1	4	46.51%	53.49%	45.83%	54.17%
Squash	42	98	1	43	30.00%	70.00%	30.43%	69.57%
Swimming	531	349	6	371	60.34%	39.66%	60.14%	39.86%
Table Tennis	12	46	0	9	20.69%	79.31%	19.40%	80.60%
Taekwondo	50	50	3	2	50.00%	50.00%	49.52%	50.48%
Tennis	128	118	1	18	52.03%	47.97%	50.94%	49.06%
Triathlon	91	86	0	5	51.41%	48.59%	52.20%	47.80%
Volleyball	22	26	0	6	45.83%	54.17%	42.59%	57.41%
Other Sports	376	172	7	69	68.61%	31.39%	68.75%	31.25%
Total	4,075	4,336	78	2,017	48.45%	51.55%	48.25%	51.75%

*Note that unknown sports were not adjusted

Table 5: Survey Percentages of Male and Females by Sport: Known and Imputed (Excl. Sport Not Stated)

Although the data was not adjusted for missing male/female split at the junior/adult level, Table 6 (below) shows that the imputed values are close to the known male and female percentages at both the junior and adult level.

Table 6: Survey Percentages of Male and Females by Sport and Age: Known and Imputed (Excl. Sport Not Stated, % Rounded to 1 D.P.)

Sport	Junior (Under-18)				Adult (18 or Over)				Junior (Under-18)				Adult (18 or Over)			
	Female	Male	Prefer not to say	Missing	Female	Male	Prefer not to say	Missing	% Female (Known)	% Male (Known)	% Female (Imputed)	% Male (Imputed)	% Female (Known)	% Male (Known)	% Female (Imputed)	% Male (Imputed)
	Archery	7	12	1	3	96	196	8	55	36.8%	63.2%	34.8%	65.2%	32.9%	67.1%	33.8%
Athletics	65	43	1	23	273	252	8	97	60.2%	39.8%	59.8%	40.2%	52.0%	48.0%	51.4%	48.6%
Badminton	11	27	1	12	54	80	1	46	28.9%	71.1%	31.4%	68.6%	40.3%	59.7%	40.9%	59.1%
Basketball	38	105	1	33	48	93	1	35	26.6%	73.4%	27.7%	72.3%	34.0%	66.0%	33.9%	66.1%
Bowls	1	2	0	7	88	205	2	143	33.3%	66.7%	40.0%	60.0%	30.0%	70.0%	30.6%	69.4%
Boxing	10	33	0	8	93	90	1	24	23.3%	76.7%	29.4%	70.6%	50.8%	49.2%	50.5%	49.5%
Canoeing	1	3	0	0	61	100	0	3	25.0%	75.0%	25.0%	75.0%	37.9%	62.1%	38.4%	61.6%
Cricket	3	14	1	0	4	32	3	9	17.6%	82.4%	16.7%	83.3%	11.1%	88.9%	10.4%	89.6%
Curling	1	3	0	0	61	78	1	9	25.0%	75.0%	25.0%	75.0%	43.9%	56.1%	46.3%	53.7%
Cycling	8	46	0	5	89	188	3	20	14.8%	85.2%	18.6%	81.4%	32.1%	67.9%	32.0%	68.0%
Disability Sport	0	0	0	0	7	14	1	2	0.0%	0.0%	0.0%	0.0%	33.3%	66.7%	29.2%	70.8%
Fencing	4	8	0	0	14	14	1	1	33.3%	66.7%	33.3%	66.7%	50.0%	50.0%	50.0%	50.0%
Football	33	180	1	22	131	310	4	160	15.5%	84.5%	15.3%	84.7%	29.7%	70.3%	27.6%	72.4%
Golf	8	13	0	0	69	299	2	65	38.1%	61.9%	0.0%	100.0%	18.8%	81.3%	19.5%	80.5%
Gymnastics	529	42	3	92	258	29	5	207	92.6%	7.4%	92.5%	7.5%	89.9%	10.1%	89.8%	10.2%
Hockey	7	10	1	4	58	45	0	11	41.2%	58.8%	50.0%	50.0%	56.3%	43.7%	56.1%	43.9%
Ju-Jitsu	1	1	0	0	5	13	1	3	50.0%	50.0%	50.0%	50.0%	27.8%	72.2%	27.3%	72.7%
Judo	41	60	0	6	52	98	0	28	40.6%	59.4%	42.1%	57.9%	34.7%	65.3%	34.3%	65.7%
Karate	11	18	1	1	40	37	1	9	37.9%	62.1%	41.9%	58.1%	51.9%	48.1%	55.2%	44.8%
Netball	48	0	0	6	222	1	0	36	100.0%	0.0%	100.0%	0.0%	99.6%	0.4%	99.2%	0.8%
Orienteering	1	3	0	1	48	58	1	2	25.0%	75.0%	40.0%	60.0%	45.3%	54.7%	45.0%	55.0%
Rowing	16	8	0	2	78	63	0	10	66.7%	33.3%	69.2%	30.8%	55.3%	44.7%	55.6%	44.4%
Rugby Union	8	41	0	21	74	366	2	259	16.3%	83.7%	17.1%	82.9%	16.8%	83.2%	16.3%	83.7%
Scuba Diving	0	0	0	0	4	6	0	0	0.0%	0.0%	0.0%	0.0%	40.0%	60.0%	40.0%	60.0%
Shinty	4	3	1	1	18	19	0	9	57.1%	42.9%	55.6%	44.4%	48.6%	51.4%	47.8%	52.2%
Shooting	0	0	0	0	2	7	1	0	0.0%	0.0%	0.0%	0.0%	22.2%	77.8%	30.0%	70.0%
Snowsport	9	12	0	0	11	11	1	4	42.9%	57.1%	42.9%	57.1%	50.0%	50.0%	48.1%	51.9%
Squash	6	4	0	0	36	94	1	43	60.0%	40.0%	60.0%	40.0%	27.7%	72.3%	28.7%	71.3%
Swimming	282	186	2	113	249	163	4	258	60.3%	39.7%	61.7%	38.3%	60.4%	39.6%	58.8%	41.2%
Table Tennis	0	5	0	1	12	41	0	8	0.0%	100.0%	0.0%	100.0%	22.6%	77.4%	21.3%	78.7%
Taekwondo	33	34	2	0	17	16	1	2	49.3%	50.7%	50.7%	49.3%	51.5%	48.5%	47.2%	52.8%
Tennis	22	39	0	1	106	79	1	17	36.1%	63.9%	35.5%	64.5%	57.3%	42.7%	55.7%	44.3%
Triathlon	4	6	0	0	87	80	0	5	40.0%	60.0%	40.0%	60.0%	52.1%	47.9%	52.9%	47.1%
Volleyball	9	7	0	3	13	19	0	3	56.3%	43.8%	47.4%	52.6%	40.6%	59.4%	40.0%	60.0%
Other Sports	96	34	0	9	280	138	7	60	73.8%	26.2%	74.8%	25.2%	67.0%	33.0%	67.0%	33.0%
Total	1,317	1,002	16	374	2,758	3,334	62	1,643	56.8%	43.2%	57.3%	42.7%	45.3%	54.7%	45.1%	54.9%

Table 6: Survey Percentages of Male and Females by Sport and Age: Known and Imputed (Excl. Sport Not Stated)

In Table 7 (below), the final unweighted figures including imputed gender are shown. These are now in a form that now match the SGB membership list shown in Table 3. The difference between the SGB membership list percentages and the survey percentages shown below is used as the weight.

Table 7: Unweighted Percentages (includes imputed gender, excludes Sport not stated)

Sport	Junior <i>n</i>		Adult <i>n</i>		Junior %		Adult %	
	Female	Male	Female	Male	Female	Male	Female	Male
Archery	8	15	120	235	0.08%	0.14%	1.14%	2.24%
Athletics	79	53	324	306	0.75%	0.50%	3.08%	2.91%
Badminton	16	35	74	107	0.15%	0.33%	0.70%	1.02%
Basketball	49	128	60	117	0.47%	1.22%	0.57%	1.11%
Bowls	4	6	134	304	0.04%	0.06%	1.28%	2.89%
Boxing	15	36	105	103	0.14%	0.34%	1.00%	0.98%
Canoeing	1	3	63	101	0.01%	0.03%	0.60%	0.96%
Cricket	3	15	5	43	0.03%	0.14%	0.05%	0.41%
Curling	1	3	69	80	0.01%	0.03%	0.66%	0.76%
Cycling	11	48	96	204	0.10%	0.46%	0.91%	1.94%
Disability Sport	0	0	7	17	0.00%	0.00%	0.07%	0.16%
Fencing	4	8	15	15	0.04%	0.08%	0.14%	0.14%
Football	36	200	167	438	0.34%	1.90%	1.59%	4.17%
Golf	0	21	85	350	0.00%	0.20%	0.81%	3.33%
Gymnastics	616	50	448	51	5.86%	0.48%	4.26%	0.49%
Hockey	11	11	64	50	0.10%	0.10%	0.61%	0.48%
Ju-Jitsu	1	1	6	16	0.01%	0.01%	0.06%	0.15%
Judo	45	62	61	117	0.43%	0.59%	0.58%	1.11%
Karate	13	18	48	39	0.12%	0.17%	0.46%	0.37%
Netball	54	0	257	2	0.51%	0.00%	2.45%	0.02%
Orienteering	2	3	49	60	0.02%	0.03%	0.47%	0.57%
Rowing	18	8	84	67	0.17%	0.08%	0.80%	0.64%
Rugby Union	12	58	114	587	0.11%	0.55%	1.09%	5.59%
Scuba Diving	0	0	4	6	0.00%	0.00%	0.04%	0.06%
Shinty	5	4	22	24	0.05%	0.04%	0.21%	0.23%
Shooting	0	0	3	7	0.00%	0.00%	0.03%	0.07%
Snowsport	9	12	13	14	0.09%	0.11%	0.12%	0.13%
Squash	6	4	50	124	0.06%	0.04%	0.48%	1.18%
Swimming	360	223	396	278	3.43%	2.12%	3.77%	2.65%
Table Tennis	0	6	13	48	0.00%	0.06%	0.12%	0.46%
Taekwondo	35	34	17	19	0.33%	0.32%	0.16%	0.18%
Tennis	22	40	113	90	0.21%	0.38%	1.08%	0.86%
Triathlon	4	6	91	81	0.04%	0.06%	0.87%	0.77%
Volleyball	9	10	14	21	0.09%	0.10%	0.13%	0.20%
Other Sports	104	35	325	160	0.99%	0.33%	3.09%	1.52%
Column Total	1,553	1,156	3,516	4,281	14.78%	11.00%	33.47%	40.75%
% Female vs. Male					57.33%	42.67%	45.09%	54.91%
Overall Junior/Adult	2,709		7,797		25.79%		74.21%	

Table 7: Unweighted Percentages (includes imputed gender, excludes sport not stated)

The weight for each respondent is calculated as:

$$W = \frac{p_{ijk}}{\hat{p}_{ijk}}$$

Where W is the weight, p_{ijk} is the proportion of the SGB population in sport l , gender j and age group k and \hat{p}_{ijk} is the proportion in the survey sample in sport l , gender j and age group k .

The final weighted percentages can be seen below. The weighting accounts for the different mix of sports and genders and the mix of junior and adult level respondents.

It should be noted that it was necessary to merge the **sportscotland** counts for male and female junior netball and table tennis figures as all survey respondents in this age group were all female in the case of netball and all male in the case of table tennis. Additionally, golf was assumed to be all male at junior level due to low junior survey counts but high representation in the **sportscotland** figures. In this instance, the merger of the male and female categories was to minimise extreme weightings.

Table 8: Final Weighted Percentages (includes imputed genders, excludes sport not stated)

Sport	Junior Weighted <i>n</i>		Adult Weighted <i>n</i>		Junior Weighted %		Adult Weighted %	
	Female	Male	Female	Male	Female	Male	Female	Male
Archery	6	10	9	16	0.06%	0.10%	0.08%	0.16%
Athletics	65	60	58	80	0.62%	0.57%	0.55%	0.76%
Badminton	16	37	18	33	0.15%	0.35%	0.17%	0.31%
Basketball	25	51	10	28	0.24%	0.49%	0.09%	0.27%
Bowls	9	14	232	577	0.09%	0.13%	2.21%	5.49%
Boxing	2	17	15	42	0.02%	0.16%	0.14%	0.40%
Canoeing	6	9	18	23	0.06%	0.09%	0.17%	0.22%
Cricket	3	84	3	73	0.03%	0.80%	0.03%	0.69%
Curling	5	8	53	94	0.05%	0.07%	0.51%	0.89%
Cycling	7	31	23	103	0.07%	0.29%	0.22%	0.98%
Disability Sport	0	0	2	3	0.00%	0.00%	0.02%	0.03%
Fencing	2	4	3	5	0.02%	0.04%	0.03%	0.04%
Football	144	1,041	30	617	1.37%	9.91%	0.28%	5.87%
Golf*	0	217	298	2,002	0.00%	2.06%	2.84%	19.06%
Gymnastics	334	59	25	5	3.18%	0.56%	0.24%	0.05%
Hockey	54	35	40	36	0.52%	0.33%	0.38%	0.34%
Ju-Jitsu	0	1	0	1	0.00%	0.01%	0.00%	0.01%
Judo	31	68	4	15	0.29%	0.65%	0.03%	0.14%
Karate	63	99	14	27	0.60%	0.95%	0.14%	0.26%
Netball**	42	0	50	0	0.40%	0.00%	0.48%	0.00%
Orienteering	4	6	8	9	0.04%	0.05%	0.07%	0.09%
Rowing	10	9	12	14	0.09%	0.09%	0.11%	0.13%
Rugby Union	21	235	31	234	0.20%	2.24%	0.30%	2.22%
Scuba Diving	0	0	3	11	0.00%	0.00%	0.02%	0.11%
Shinty	7	17	6	18	0.07%	0.16%	0.05%	0.17%
Shooting	0	0	4	26	0.00%	0.00%	0.04%	0.25%
Snowsport	15	22	18	29	0.15%	0.21%	0.17%	0.28%
Squash	7	14	15	61	0.07%	0.14%	0.14%	0.58%
Swimming	105	72	95	48	1.00%	0.69%	0.90%	0.46%
Table Tennis*	0	4	2	15	0.00%	0.04%	0.02%	0.14%
Taekwondo	77	100	30	43	0.73%	0.96%	0.29%	0.41%
Tennis	137	197	213	255	1.31%	1.88%	2.03%	2.43%
Triathlon	6	5	21	29	0.05%	0.05%	0.20%	0.28%
Volleyball	5	5	7	7	0.05%	0.05%	0.07%	0.07%
Other Sports	42	63	221	489	0.40%	0.60%	2.10%	4.66%
Total	1,252	2,596	1,590	5,068	11.91%	24.71%	15.14%	48.24%
% Female vs. Male					32.54%	67.46%	23.89%	76.11%
Overall Junior/Adult	3,847		6,659		36.62%		63.38%	

*All junior Golf and Table Tennis weighted as male.

**Junior Netball weighted as female.

Table 8: Final Weighted Percentages (includes imputed genders, excludes sport not stated)

Table 9 (below) shows the final weightings for each of the categories. Note that a weight below 1 indicates that the grouping was relatively overrepresented in the survey sample (weighted down) whereas a weight greater than 1 will indicate underrepresentation in the survey sample (weighted up). The weight is used to correct for these representation differences.

It is desirable for a weighting to be five or less as a rule of thumb. This would mean that one person would represent a maximum of five people in the final results. In the final weightings, only golf exceeds this value with weightings of 10.32 at junior level (gender combined) and 5.72 for adult males. This was due to golf being very underrepresented in the survey data compared to SGB membership. The junior golf weight was also inflated by the undersampling of junior respondents in general.

A further point to note is that where sport was unknown, a weight of 1 was applied as this category could not be weighted. No adjustment was made for this group for gender or age group.

Table 9: Final Weights per Category (includes imputed genders)

Sport	Junior Base	Adult Base	Junior		Adult	
			Female	Male	Female	Male
Archery	23	355	0.80	0.70	0.07	0.07
Athletics	132	630	0.82	1.14	0.18	0.26
Badminton	51	181	0.99	1.05	0.24	0.31
Basketball	177	177	0.50	0.40	0.17	0.24
Bowls	10	438	2.28	2.29	1.73	1.90
Boxing	51	208	0.14	0.46	0.14	0.41
Canoeing	4	164	6.05	3.16	0.28	0.23
Cricket	18	48	1.12	5.63	0.56	1.69
Curling	4	149	4.85	2.58	0.77	1.17
Cycling	59	300	0.64	0.65	0.24	0.50
Disability Sport		24			0.31	0.18
Fencing	12	30	0.53	0.47	0.19	0.31
Football	236	605	4.00	5.20	0.18	1.41
Golf	21	435		10.32	3.51	5.72
Gymnastics	666	499	0.54	1.17	0.06	0.10
Hockey	22	114	4.93	3.15	0.63	0.72
Ju-Jitsu	2	22	0.25	0.67	0.03	0.05
Judo	107	178	0.69	1.10	0.06	0.13
Karate	31	87	4.87	5.52	0.30	0.70
Netball	54	259	0.78		0.20	0.13
Orienteering	5	109	2.12	1.90	0.16	0.15
Rowing	26	151	0.53	1.17	0.14	0.21
Rugby Union	70	701	1.78	4.06	0.27	0.40
Scuba Diving		10			0.64	1.88
Shinty	9	46	1.47	4.26	0.25	0.76
Shooting		10			1.41	3.71
Snowsport	21	27	1.69	1.83	1.38	2.10
Squash	10	174	1.18	3.55	0.30	0.49
Swimming	583	674	0.29	0.32	0.24	0.17
Table Tennis	6	61		0.74	0.12	0.31
Taekwondo	69	36	2.20	2.96	1.78	2.25
Tennis	62	203	6.24	4.93	1.89	2.83
Triathlon	10	172	1.42	0.89	0.23	0.36
Volleyball	19	35	0.57	0.52	0.51	0.34
Other Sports	139	485	0.40	1.80	0.68	3.06
Not Stated	152	567	1.00	1.00	1.00	1.00
Total/Max	2,861	8,364	6.24	10.32	3.51	5.72

Table 9: Final Weights per Category (includes imputed genders)

Table 10 (below) indicates that the weighted percentages in Table 8 are identical to the **sportscotland** SGB percentages in Table 3 except in sports where it was necessary to collapse genders for weighting. Note that differences in percentages are absolute (the subtraction of one percentage from another) rather than relative (percentage difference of the absolute difference).

Table 10: Differences Between Weighted Percentages and sportscotland Percentages (includes imputed gender, excludes sport not stated)

Sport	Junior Sport Gender %		Adult Sport Gender %		Junior Overall %		Adult Overall %	
	Female	Male	Female	Male	Female	Male	Female	Male
Archery	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Athletics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Badminton	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Basketball	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Bowls	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Boxing	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Canoeing	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cricket	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Curling	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cycling	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Disability Sport			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Fencing	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Football	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Golf*	-16.74%	16.74%	0.00%	0.00%	0.35%	-0.35%	0.00%	0.00%
Gymnastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Hockey	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ju-Jitsu	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Judo	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Karate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Netball*	0.23%	-0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Orienteering	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Rowing	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Rugby Union	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Scuba Diving			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Shinty	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Shooting			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Snowsport	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Squash	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Swimming	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Table Tennis*	-14.83%	14.83%	0.00%	0.00%	0.01%	-0.01%	0.00%	0.00%
Taekwondo	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Tennis	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Triathlon	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volleyball	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other Sports	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	-0.96%	0.96%	0.00%	0.00%	0.35%	-0.35%	0.00%	0.00%
% Female vs. Male					0.96%	-0.96%	0.00%	0.00%
Overall Junior/Adult					0.00%		0.00%	

*Genders combined during weighting.

Table 10: Differences Between Weighted Percentages and **sportscotland** Percentages (includes imputed genders, excludes sport not stated)