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University College Cork, Ireland Coláiste na hOllscoile Corcaigh

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The association of family, friends and teacher support with girls' sport and physical activity on the island of Ireland.

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1		SOCIAL SUPPORT & GIRLS' SPORT IN IRELAND
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26 Abstract

> *Background:* The current study was the largest physical activity (PA) surveillance assessment of youth undertaken in Ireland in recent years. The purpose of this research was to assess the impact of social support, while controlling for age and screen time, on PA and sport participation, across a representative sample of Irish female youth.

Methods: A total of 3,503 children (mean age: 13.54 ± 2.05 years) across the island of Ireland participated. Participants completed a previously validated electronic questionnaire while supervised in a classroom setting, which investigated their; 1) levels of PA, 2) screen time, 3) community sport participation, and 4) social support (friend, family, and teacher) to be physically active/partake in sport.

Results: There were significant differences, with medium and large effect sizes, for
social support from friends and family across types of sports participation. Specifically,
girls who participated in the most popular team sports, when compared to the most
popular individual sports, reported higher social support scores for friends and family

41 structures.

Conclusions: Findings from this study confirm the contributing influence of friends and
 family as sport and PA support networks for girls. Interventions should consider the
 importance of culturally relevant team sports for PA engagement in female youth.

 Keywords: Physical activity: screen time: individual sport: team sport: female:

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	48	Introduction
	49	Taking part in physical activity (PA) during childhood and adolescence has a
	50	multitude of health benefits ^{1,2} . Yet, globally, participation levels in this age group
	51	remain low ³ . In particular, the existing gender differences among adolescents are of
	52	concern, specifically the emergent gap that has developed in PA over a 15-year
	53	timeframe (2001 and 2016) ⁴ . Adolescent females consistently report lower levels of
	54	PA ^{4,5} , and this decline increases further with age ^{6,7} . Most recent nationally
	55	representative surveillance data of youth sport and PA from the Children's Sport
	56	Participation and Physical Activity (CSPPA 2018) study (n=6,651; mean age=13.8 \pm
	57	2 years) revealed that Irish female adolescents, at all ages, were less likely to meet
	58	PA guidelines ⁸ .
	59	The CSPPA 2018 study ⁸ across the Republic of Ireland reported that only 10% of
	60	second level school adolescents met the PA guidelines ⁹ and only 58% of children
	61	and youth participated in community sport at least once a week. It is well-established
	62	that boys participate in sport more frequently than girls, specifically during
	63	adolescence ^{6,8} , with data from the Health Behaviour in School-Aged Children
	64	(HBSC) survey finding that 75% of 10- to 14- year old boys report playing with a
	65	club, when compared to 59% of girls ¹⁰ . Given the argument that organised sport is
	66	more tailored to suit boys ⁴ and changing the PA behaviour of adolescent girls is
	67	challenging ⁶ , much work is needed in order to increase the PA and sport
	68	participation of Irish female adolescents.
	69	Updated evidence from <u>Tremblay et al.¹¹ have defined sedentary behaviour as any</u>
ļ	70	waking behaviour (independent of sleep) that is characterised by an energy
	71	expenditure ≤1.5 metabolic equivalents (METs), while in a sitting, reclining or lying
	72	posture. As a research domain, sedentary behaviour has generated significant

attention in recent years amongst children and youth, due to the specific attraction of electronic games, computer use and the over-reliance of screen-based engagement¹²⁻¹⁴. It is unsurprising given the surge in data^{12,14,15} that physically active pursuits during free time appear to be slowly disappearing at the expense of screen time in developed countries for adolescents. In the Biddle et al., (2014)¹⁶ comprehensive review of interventions designed to reduce sedentary behaviours in young people, screen time was found to play a critical role in the causation of obesity due to its co-occurrence with other unhealthy behaviours. Specific findings by O'Brien et al., (2018)¹² on the high prevalence of overweight and obesity in Irish adolescent girls (29.4%) suggests that there may be a gender-related association between higher levels of body composition and screen time engagement. Given the gender mismatch between girls and boys in terms of PA and sport participation^{8,17}, strengthened by the recent increased levels of screen time pursuits¹⁵, further efforts to understand the determinants of these behaviours in girls are warranted. Current research on female youth reveals that having fun¹⁸, keeping fit, and being with friends¹⁹ are key motivators for female youth involvement in sport and PA. Laird et al., (2016)²⁰ previously highlighted that there was some evidence to suggest that social support could positively influence the PA levels of adolescent girls, however, such associations were not well understood. From a sport perspective specifically, a systematic review of social support in youth observed that parental and peer support have significant potential in shaping youth sport experiences from both a positive (motivation, participation) and negative (drop-out) lens²¹. Social support can be emotional (encouragement), instrumental (financial) or informational (advice), and is defined as the resources provided by the interactions with significant

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others that can influence behaviour²². Evidence suggests that such support for young female adolescents' can come from parents, guardians, friends, teachers and coaches, as these key stakeholders can all have a positive impact on youth's involvement and enjoyment in sport^{21,23}. Teachers, however, are among a cohort that are under researched in relation to how they support female adolescent PA²⁰. In Ireland, current research with girls (n = 331; mean age = 10.92 ± 1.22 years) observed that the most pertinent PA and sport participation barriers included lack of time, fear of injury, and the negative relationships established with coaches and teachers¹⁹. At state level, there have been a number of mass media campaigns and recent policies introduced in Ireland to try and overcome the poor engagement in PA and sport participation among women and girls^{24,25}. The Sport Ireland Policy on Women in Sport²⁴ also has a key aim towards increasing levels of sport and PA; focusing on women and girls of all ages, ability levels and socioeconomic status. This Sport Ireland policy²⁴ objective aligns with the National Strategy for Women and Girls 2017-2020²⁵, by seeking to reduce the gender gradient and the female dropout rates from sport and PA. In order to develop and implement targeted strategies to increase PA and sport participation among the female youth population in Ireland, it is important to assess their current participation, and the existing patterns and influences on girls' screen time exposure. The purpose of this paper is to gain an insight into the impact of family, friends and teachers' social support, on female youth participation in sport

and physical activity, from their perspective, by specifically examining their

responses from the most recent nationally representative survey⁸.

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	121	<u>Methods</u>
	122	Overview of the Study
	123	This study evolved from the nationally representative (N=6,651; range 10 to 19 years
0 1	124	of age; 53% female) CSPPA 2018 study ⁸ that collected PA data from children and
2 3	125	adolescents across the island of Ireland between January and June 2018.
4 5	126	Ethical approval was provided by the Ethics Research Committees of the University
6 7 8	127	of Limerick (EHSREC27_11_19) in January 2018. Information about the design,
9 0	128	protocol, and sampling of the CSPPA study has been published elsewhere ⁸ . Briefly,
1 2	129	from the included sample of schools, both primary and second level school
3 4	130	management (Principal and Deputy Principal) on the island of Ireland were provided
5 6 7	131	with a comprehensive overview and outline of the intended data collection protocol.
8 9	132	Following agreement to participate from school management, information sheets and
0 1	133	consent forms were then distributed to the selected school samples. Due to the
2 3 4	134	targeted focus of data collection with children and adolescents, informed parental
5 6	135	consent and child assent were the essential requirements for eligible participation.
7 8	136	All participants were free to withdraw from the CSPPA 2018 study at any stage.
9 0 1	137	Participants and Setting
2 3	138	As part of this 8-year follow-up investigation, all schools in the Republic of Ireland
4 5	139	that participated in the previous CSPPA 2010 study ²⁶ were once again invited to
6 7 0	140	participate in the CSPPA 2018 study ⁸ . An important amendment was the inclusion of
9 0	141	schools from Northern Ireland, specifically as a strategy to obtain representative data
1 2	142	at an all-island level. For these reasons, a systematic one stage cluster sampling
3 4 5	143	method was undertaken to allow for a larger sample of children to be recruited
6	144	across the island of Ireland.

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145	A total of 102 single gender or mixed-gender primary and second level schools
146	consented to participate from the (Republic of Ireland (72.8%, n=74) and Northern
147	Ireland (27.2%, n=28). For the current gender specific study, the school stratification
148	criteria included the following: 1) school gender: females only, 2) school socio-
149	economic status: disadvantaged or non-disadvantaged (Republic of Ireland) and
150	percentage of free meals class (Northern Ireland), 3) school location: urban or rural
151	(categorised by population density) and 4) school size: small, medium or large
152	(based on total number of pupils). Of the original participant sample in the CSPPA
153	2018 study (N=6,651; range 10 to 19 years of age), the present investigation of
154	female only participants comprised of 3503 children (mean age 13.54 ± 2.05 years).
155	The age-range breakdown of the female sample was; 32.7% (n=1,145) 10 to 12-year
156	olds, 48.6% (n=1,701) 13 to 15-year olds, and 18.8% (n=657) 16 to 19-year olds.
157	Data Collection
158	Measure
159	Self-Report Questionnaire. The CSPPA 2018 questionnaire was administered
160	using a laptop/tablet technology, following the same protocol employed in the
161	CSPPA 2010 ²⁶ and the Take PART studies ²⁷ . The survey was completed in school
162	classrooms, with researchers and teachers being available to assist with any literacy
163	issues. All items included in the 2018 CSPPA study questionnaire were deemed to
164	be developmentally appropriate for the children being surveyed. Instruments used

variables identified for analysis included:1) Levels of PA, 2) screen time behaviours (defined as minutes spent sitting in front of a TV/DVD/video or computer screen²⁶, 3) community sport participation, and 4) social support structures (friend, familial –

had high validity, alongside internal consistency and are previously reported in the

Woods et al., (2010)²⁶ protocol. For the purpose of the current study, the specific

defined as a member of your household, and teacher) to be physically

active/participate in sport.

For the social support structures variable, the allocated questions were consistent across the three perspectives (friend, familial and teacher), specifically targeting a typical week, and the effect that these three groups have on their engagement in PA and sport. Such questions included; 1. how often has a friend/member of your household/teacher encouraged you to do physical activities or play sport; 2. how often do your friends/members of your household/teachers tell you that you are doing well in physical activities or sports. The answer options to these questions were as follows; never, once, sometimes, almost every day, or every day. Following the Ng et al., (2019)²⁸ PA grouping protocol, participants were categorised as inactive, slightly active, almost fulfilling the PA recommendations, and fulfilling the PA recommendations. For quantifying participants' adherence to the recommended screen time guidelines, previous Canadian research procedures for children and youth were employed; ≤ 120 minutes of daily screen time²⁹. How much encouragement participants received from each of the three social support structures had a standardised, and a maximally derived score of 25. In the context of the most popular sports participated in, for comparative purposes, both dance and swimming were classified as individual pursuits, similar to other research^{30,31}. Team sports were comprised of Gaelic football, soccer and camogie.

Data Analysis

The current dataset was analysed using the Statistical Package for Social Sciences (SPSS), version 26.0 for Windows. All data were checked for normality before statistical analysis. Descriptive statistics for PA, screen time, community sport

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participation and social support (friends, family, and school) were calculated via means or medians, standard deviations or interguartile ranges, minimums, maximums and percentages where appropriate. A one-way between-groups analysis of variance (ANOVA) was conducted to compare the average reported daily screen time (minutes per day), when differentiated by PA grouping. Chi-square tests for independence were used to examine whether PA grouping and daily screen time recommendations existed. A further one-way between-groups analysis of variance of covariance (ANCOVA) was conducted to explore the impact of social support from friends, family and teachers, when differentiated by the five most prevalent (popular) team or individual sports of participation. Participants' age and mean daily screen time engagement were used as the covariates in this analysis. The reported eta squared values correlate with the ³² classification values of .01 as a small effect, .06 as a medium effect and .14 as a Review large effect.

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2 3	210	Results
4 5	210	
6 7	211	Descriptive and frequency data for the overall sample relating to age, location,
8 9	212	school, and disability status is provided in Table 1.
10 11 12	213	INSERT TABLE 1 APPROXIMATELY HERE
13 14	214	Physical Activity (self-report)
15 16	215	Figure 1 documents the prevalence of participants self-reporting to meet the daily
17 18 19	216	60-minute PA recommendation, over the course of a typical 7-day week (inclusive of
20 21	217	weekday and weekend structure). Self-report PA data showed that 18.4% of
22 23	218	participants (n=645) met the 60-minute MVPA guideline on 0-2 days a week
24 25 26	219	(inactive), 37.6% (n=1317) met the guidelines on 3-4 days a week (slightly active),
20 27 28	220	and 33.9% (n=1188) met the guidelines on 5-6 days a week (almost fulfilling the PA
29 30	221	recommendations). The remaining 10.1% of participants (n=353) met the guidelines
31 32	222	7 days a week (fulfilling the PA recommendations).
33 34 35	223	INSERT FIGURE 1 APPROXIMATELY HERE
36 37 38	224	Screen Time Behaviour (self-report)
39 40	225	The overall mean daily screen time for participants was 178.86 ± 183.63 minutes per
41 42	226	day (min/d). Following previously reported screen time behaviour guidelines for
43 44	227	children and youth ²⁹ , Table 2 outlines the overall daily screen time (min/d), and the
46 47	228	adherence to the associated daily screen time recommendations (≤120 min/d),
48 49	229	according to PA grouping (inactive, slightly active, almost fulfilling the PA
50 51	230	recommendations, and fulfilling the PA recommendations).
52 53 54	231	INSERT TABLE 2 APPROXIMATELY HERE
56 57	232	A one-way between-groups analysis of variance (ANOVA) was conducted to
58 59 60	233	compare the mean daily screen time (min/d), when differentiated by PA grouping

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234	(inactive, slightly active, almost fulfilling the PA recommendations, and fulfilling the
235	PA recommendations). There was a statistically significant difference in mean daily
236	screen time for the four PA groups: $F(3, 3063) = 27.7, p = .0001$. Furthermore, a
237	chi-square test for independence indicated that significant PA grouping differences
238	were also observed in those self-reporting to meet the daily screen time
239	recommendations (≤120 min/day) (χ^2 = 74.7, <i>p</i> =.0001); a statistically higher
240	proportion of those almost fulfilling and those fulfilling the PA recommendations met
241	the daily screen time recommendations (58.2% and 55.3% respectively), when
242	compared to the slightly active and inactive groups (46.1% and 37.2% respectively).
243	Community Sport participation levels
244	Of those that participate in sport at least once a week, the five most popular team
245	and individual sports undertaken can be seen in Figure 2. The team sport of Ladies
246	Gaelic Football (24% n=853) is the most popular, followed by the individual pursuits
247	of dance (23% n=813) and swimming (21% n= 738).
248	INSERT FIGURE 2 APPROXIMATELY HERE
249	Social Support
249 250	Social Support All questions relating to the individual social supports of friends, family and teachers
249 250 251	Social Support All questions relating to the individual social supports of friends, family and teachers to participate in sport had a standardised, and a maximally derived score of 25. Of
249 250 251 252	Social Support All questions relating to the individual social supports of friends, family and teachers to participate in sport had a standardised, and a maximally derived score of 25. Of that 25, the support of friends was reported as the highest form of social support to
249 250 251 252 253	Social Support All questions relating to the individual social supports of friends, family and teachers to participate in sport had a standardised, and a maximally derived score of 25. Of that 25, the support of friends was reported as the highest form of social support to participants (15.02±3.48), followed by family (14.96±4.58) and then teachers
249 250 251 252 253 254	Social Support All questions relating to the individual social supports of friends, family and teachers to participate in sport had a standardised, and a maximally derived score of 25. Of that 25, the support of friends was reported as the highest form of social support to participants (15.02±3.48), followed by family (14.96±4.58) and then teachers (10.88±3.87).
249 250 251 252 253 254 255	Social Support All questions relating to the individual social supports of friends, family and teachers to participate in sport had a standardised, and a maximally derived score of 25. Of that 25, the support of friends was reported as the highest form of social support to participants (15.02±3.48), followed by family (14.96±4.58) and then teachers (10.88±3.87). Relationship between social support and sport participation
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249 250 251 252 253 254 255 256 257	Social Support All questions relating to the individual social supports of friends, family and teachers to participate in sport had a standardised, and a maximally derived score of 25. Of that 25, the support of friends was reported as the highest form of social support to participants (15.02±3.48), followed by family (14.96±4.58) and then teachers (10.88±3.87). Relationship between social support and sport participation A one-way ANCOVA was conducted to explore the impact of social support for friends, family and teachers, while controlling for age and screen time, when
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divided into four groups according to sport participation -Group 1: did not participate in the most popular team or individual sports: Group 2: did participate in the most popular team sports (Ladies Gaelic Football, Camogie, Soccer) only; Group 3: did participate in the most popular individual sports (Dance, Swimming) only; Group 4: did participate in the most popular team and individual sports (see Figure 2). After adjusting for age and screen time, there was a statistically significant difference for social support from friends across the four types of sports participation groups: F (3, 3062) = 96.24, p = .0001 (see Table 3). The medium effect size, calculated using eta squared, was 0.09. Specifically, post-hoc comparisons using the Tukey HSD test indicated that the mean social support score in friends for Group 2 (M = 16.32, 95%) CI 16.07, 16.57) was significantly higher and different from Group 3 (M = 14.98, 95%) CI 14.74, 15.22).

There was also a statistically significant difference for familial social support across the four types of sports participation groups, after adjusting for age and screen time F(3, 3062) = 172.84, p = .0001. The large effect size, calculated using eta squared, was 0.15. Specifically, post-hoc comparisons using the Tukey HSD test again indicated that the mean familial social support score for Group 2 (M = 16.81, 95% CI 16.48, 17.17) was significantly higher and different from Group 3 (M = 15.42, 95% CI 15.11, 15.73).

Finally, there was also a statistically significant difference for social support from teachers across the four types of sports participation groups, after adjusting for age and screen time: F (3, 3062) = 18.80, p = .0001. The small effect size, calculated using eta squared, was 0.02. Specifically, post-hoc comparisons using the Tukey HSD test again indicated that the mean social support score in teachers for Group 2

1		SOCIAL SUPPORT & GIRLS' SPORT IN IRELAND
2 3 4	283	(M = 11.65, 95% CI 11.36, 11.95) was significantly different from Group 3 (M =
5 6	284	10.50, 95% CI 10.22, 10.78).
7 8	285	INSERT TABLE 3 APPROXIMATELY HERE
9 10 11 12 13 14 15 16 17 18 19 20 21 22 32 4 25 26 27 28 29 30 31 22 33 34 35 36 37 38 9 40 41 42 43 44 546 47 48 49 50 52 35 45 56 57 58 9 60		

Discussion

Globally, a majority of children and adolescents are not meeting PA guidelines for health, with girls consistently reporting lower engagement than boys⁴. In order to upscale known effective policies, and develop new targeted strategies to increase the involvement in sport and PA, it is important to gain an insight into the factors that influence females' participation. Social support is regularly reported in the literature to influence involvement in sport and PA^{33,34}, however, this support can come from a variety of sources²⁰. Teachers, family and friends are the selected sources of social support reported in this study. The aim of this study was, therefore, to assess the patterns and support structures influencing Irish adolescent females' participation in sport and PA, by examining self-report data from 10-18-year-old females that participated in the most recent all-island CSPPA 2018⁸ study.

² 299 *Physical activity/inactivity – screen time usage*

Given that only 1 in 10 (10.1%; n=353) participants in the current study reported meeting the PA guidelines for health⁹ and approximately 1/2 (49.4%; n=1516) met the screen time guidelines for health¹¹, it could be argued that the high average self-reported daily screen time of these females (178.86 minutes per day) could be contributing to the very low levels of PA among this cohort ³⁵. Previous research in Ireland¹² has also reported this relationship amongst adolescent girls. Although a cause and effect relationship between PA and screen time cannot be determined in this cross-sectional study, a recent systematic review of reviews³⁶ reported that higher amounts of screen time alone can lead to a variety of health problems for young people including adiposity and depressive symptoms; factors that a physically active lifestyle has the potential to reduce^{37,38}.

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3 4	312	Physical activity grouping and screen time association
5 6 7	313	Results show that there were statistically different screen time scores for each of the
7 8 9	314	PA groupings (p<0.001). The inactive (n=645) and slightly active (n=1317) groups
10 11	315	both had higher screen time activity (228.8 \pm 221.5 min/d; 188.9 \pm 186.4 min/d,
12 13	316	respectively) compared to those almost fulfilling (n=1188; 146.7 \pm 154.5) and those
14 15	317	fulfilling the PA recommendations (n=353; 156.4 \pm 161.3). Furthermore, there was
16 17 18	318	also a statistical difference among the PA groupings and adherence to the
19 20	319	recommended daily screen time usage of \leq 120 minutes per day ³⁹ . Only 37.2% and
21 22	320	46.1% of the inactive and slightly active groups, respectively, met screen time
23 24 25	321	recommendations; while encouragingly, 58.2% and 55.3% of those almost fulfilling
26 27	322	and those fulfilling the PA recommendations met these guidelines. This is in line
28 29	323	with previous Irish research that reported a significant negative correlation between
30 31 22	324	MVPA and daily television viewing among adolescent girls ¹² . Although these
32 33 34	325	findings are only cross-sectional, such evidence challenges the conclusion that PA
35 36	326	and sedentary behaviour are unrelated ⁴⁰ and warrants further investigation.
37 38	327	Patterns of participation in sport
39 40 41	328	Woods et al. (2018) ⁸ previously reported that non-participation in community sport
42 43	329	has increased from 40-45% from 2010 to 2018, respectively. Globally, the age-
44 45	330	related decline in female PA has been well documented ^{6,7,41} ; however, this current
46 47 48	331	study has further highlighted that no one sport or identified PA is being regularly
49 50	332	participated in by more than a quarter of female participants (see Figure 2). For the
51 52	333	minority of adolescent females in Ireland that participate in sport, they participate in a
53 54 55	334	wide variety of team and/or individual community sports, with Ladies Gaelic Football
55 56 57	335	(24%), dance (23%) and swimming (21%) as the most popular. Ladies Gaelic
58 59 60	336	Football has its grassroots in local community groups throughout Ireland, and the

finding that it is the most popular sport played by adolescent girls is encouraging.

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The National Governing Body (Ladies Gaelic Football Association) has invested 38 efforts into increasing participation rates for this age group through its Gaelic4Girls 39 programme¹⁹, and as key partners in the aforementioned 20x20⁴² campaign. 40 Previous research has already documented how critical dance classes are in helping 41 adolescent girls meet current PA guidelines for health⁴³, whilst swimming can also 42 play an important role in the skeletal health of adolescents⁴⁴. These findings provide 43 additional evidence and powerful arguments for policy makers to invest in these 44 45 specific community sports to promote greater participation rates for female youth in Ireland. 46

347 Influence of social supports

Friends social support was significantly higher for those playing the most popular 48 team sports (Ladies Gaelic Football, Camogie, Soccer) only (Group 2), when 49 compared to those playing the most popular individual sports (Dance, Swimming) 50 only (Group 3) (see Table 3), with a medium effect size observed. This emerging 51 relationship is a positive finding is positive for female youth, as previous research 52 has highlighted that sports participation increases the likelihood of friends being 53 involvemenedt, which has proven effective for adolescent PA levels and wellbeing 45. 54 This is also supported by Springer et al., (2006)³³ who allude to peer support being a 55 positive influence on increasing the number of female youths engaging in sport and 56 PA. Irish data -concurs with this finding^{46,47}, surmisinghas specifically observed that 57 friends are a key component for taking part in both individual and team sports and 58 PA among adolescent females, irrespective of their activity levels or location. 59 Most recent findings with a large adolescent cohort (N=1484; mean age = 60 11.23±1.74 years old; 46% male) have observed a strong wellbeing association 61

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between PA and happiness ⁴⁸, further outlining the positive psychological contribution of peers and friends within youth sport settings. Theory advocates that the influence of peers and friends as supporting networks increases during adolescence, whilst family influences decrease^{49,50}, which is particularly pertinent among female youth^{34,51,52}. Our findings suggest that female orientated interventions should therefore consider focusing on some culturally relevant Irish team sports, such as Ladies Gaelic Football and Camogie, which promote the involvement of friends, as a starting point. Previous research has highlighted the benefit of having peers within and outside of one's sport to serve as both role models and supporters to youth participation ⁵³. Family support, however, was also a very important influence for those involved in the most popular individual and team sports in the current study, given the large effect size observed. As a result, family role modelling may still play an important part in the encouragement of Irish adolescent females to engage in some of the most popular team and individual sports across the country. Such is the example of the Dads and Daughters Exercising and Empowered (DADEE) program in Australia, which has illustrated success in younger girls⁵². While teachers had the least influence in the social support domain, they did score higher in supporting and encouraging female adolescents to participate in the most popular team sports, when compared to the most popular individual sports. The small effect size (0.02) for teachers in relation to their support for engaging adolescent females to partake in PA, compared to family and friends, is supported in the literature²⁰. In their systematic review, however, Laird et al., (2016)²⁰ were only able to include six studies in their analysis, which specifically examined the influence

386 of teachers' social support for PA in adolescent girls. While the role of teachers'

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social support might be under-explored in the adolescent PA literature, promising findings, however, were observed by Eather et al., (2013)⁵⁴ who found that social support from teachers mediated PA behaviour change in primary school children. There is no such research available on the effects of teacher support for sports participation in either primary or secondary school-aged children. The current study's findings for adolescent girls highlights the need for more teacher involvement in sport and PA promotion; considering that students spend a significant proportion of their time in the school setting⁵⁵. Furthermore, teachers can be great advocates for student involvement in sport and PA by being supportive role models and agents of change^{56,57}. The cross-sectional nature of the study somewhat restricts the interpretation of our findings, particularly as there were only a small percentage of participants that were both active and participating in sport. Nevertheless, the social supports surrounding the participants appear to be key mediators for why they partake in sport. A prospective cohort design is recommended in order to confirm whether the large effect sizes observed for family and friends increase the likelihood of participating in sport and PA; most notably the most popular team sports of Ladies Gaelic Football, Camogie, and Soccer, over the longer term.

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Table 1. Descriptive and frequency data for the overall sample relating to age, location, school, and disability status

Age	M = 13.54 SD = 2.05
% Participants From Republic of Ireland	72.8% (n=2551)
% Participants From Northern Ireland	27.2% (n=952)
% Participants Attending Primary School	23.8% (n=835)
% Participants Attending Post-Primary (Secondary) School	76.2% (n=2668)
% Participants Attending Mixed School	55.4% (n=1943)
% Participants Attending Girls Only School	44.5% (n=1560)
% Of Schools <i>DEIS</i> * (Republic of Ireland Only)	9.5% (n=243)
% Schools Rural Location	50.5% (n=1770)
% Schools Urban Location	49.5% (n=1773)
% Participants with a Disability	14.5% (n=508)

Note. % = percentage; M = mean; SD = standard deviation; n = sample size; DEIS = Delivering Equality of Opportunity in Schools;

 Table 2. Overall daily screen time and adherence to the associated screen time recommendations, according to physical activity grouping.

Variable	Inactive (n=645)		Slightly Active (n=1317)		Almost fulfilling PA recommendations (n=1188)		Fulfilling PA recommendations (n=353)		F	p-Value
	Μ	SD	М	SD	Μ	SD	Μ	SD		
Min/d overall screen time	228.8	221.5	188.9	186.4	146.7	154.5	156.4	161.3	27.7	.0001
				CX),				χ2	p-Value
Met screen time recommendations (≤120 min/day) %	37	7.2%	46.1	1%	58.2	.%	55	.3%	74.7	.0001
						Via				

Team Sport or Individual Sport Groupings										
Variable	Group 1	Group 2	Group 3	Group 4	<i>p-</i> Value	Post-Hoc	Partial			
	No Team or	Most Popular	Most Popular	Most Popular Team		Tests	eta			
	Individual Sports	Team Sports	Individual Sports	& Individual Sports			squared			
Friends Social	14.09 (n=1359)	16.32 (n=581)	14.98 (n=646)	16.22 (n=481)	.0001	*G1 <g2< td=""><td>0.09</td></g2<>	0.09			
Support 95% CI: 13.93, 14.26	95% CI:	95% CI:	95% CI:	95% CI:		*G1 <g3< td=""><td>Medium</td></g3<>	Medium			
	13.93, 14.26	16.07, 16.57	14.74, 15.22	15.97, 16.50		*G1 <g4< td=""><td></td></g4<>				
						*G2>G3				
						*G3 <g4< td=""><td></td></g4<>				
Familial Social	13.19 (n=1359)	16.81 (n=581)	15.42 (n=646)	17.02 (n=481)	.0001	*G1 <g2< td=""><td>0.15</td></g2<>	0.15			
Support95% Cl:12.98, 13.40	95% CI:	95% CI:	95% CI:	95% CI:		*G1 <g3< td=""><td>Large</td></g3<>	Large			
	12.98, 13.40	16.48, 17.13	15.11, 15.73	16.66, 17.38		*G1 <g4< td=""><td></td></g4<>				
						*G2>G3				
						*G3 <g4< td=""><td></td></g4<>				
Teacher Social	10.46 (n=1359)	11.65 (n=1359)	10.50 (n=1359)	11.31 (n=1359)	.0001	*G1 <g2< td=""><td>0.02</td></g2<>	0.02			
Support 95% Cl: 10.27, 10.66	95% CI:	95% CI:	95% CI:	95% CI:		*G1 <g4< td=""><td>Small</td></g4<>	Small			
	10.27, 10.66	11.36, 11.95	10.22, 10.78	10.98, 11.63		*G2>G3				
					*G3 <g4< td=""><td></td></g4<>					

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Note. % = percentage; MVPA = moderate-to-vigorous physical activity

Figure 1. Percentage of participants meeting 60 mins of daily MVPA in a week

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*Ladies Gaelic Football and Camogie are Irish field invasion games for female only participants based on the male equivalents of Gaelic Football and Hurling respectively.

Figure 2. The five most popular team and individual sports undertaken by participants