



Heriot-Watt University  
Research Gateway

## Social support intervention to reduce intentions to drop-out from youth sport

### Citation for published version:

Lavallee, D, Sheridan, D, Coffee, P & Daly, P 2019, 'Social support intervention to reduce intentions to drop-out from youth sport: The GAA super games centre', *Psychosocial Intervention*, vol. 28, no. 1, pp. 11-17.  
<https://doi.org/10.5093/pi2018a15>

### Digital Object Identifier (DOI):

[10.5093/pi2018a15](https://doi.org/10.5093/pi2018a15)

### Link:

[Link to publication record in Heriot-Watt Research Portal](#)

### Document Version:

Publisher's PDF, also known as Version of record

### Published In:

Psychosocial Intervention

### Publisher Rights Statement:

© 2019 Colegio Oficial de Psicólogos de Madrid.

### General rights

Copyright for the publications made accessible via Heriot-Watt Research Portal is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

### Take down policy

Heriot-Watt University has made every reasonable effort to ensure that the content in Heriot-Watt Research Portal complies with UK legislation. If you believe that the public display of this file breaches copyright please contact [open.access@hw.ac.uk](mailto:open.access@hw.ac.uk) providing details, and we will remove access to the work immediately and investigate your claim.



## A Social Support Intervention to Reduce Intentions to Drop-out from Youth Sport: The GAA Super Games Centre

David Lavallee<sup>a</sup>, Daragh Sheridan<sup>b</sup>, Pete Coffee<sup>c</sup>, and Pat Daly<sup>d</sup>

<sup>a</sup>Abertay University, Dundee, Scotland, UK; <sup>b</sup>Sport Ireland Institute, Dublin, Ireland; <sup>c</sup>University of Stirling, Scotland, UK; <sup>d</sup>Gaelic Athletic Association, Ireland

### ARTICLE INFO

#### Article history:

Received 1 March 2018  
Accepted 4 May 2018  
Available online 10 September 2018

#### Keywords:

Intervention  
Motivation  
Psychosocial  
Social identity  
Social support  
Youth sport

### ABSTRACT

Research has highlighted that drop-out from youth sport has emerged to become a global trend with drop-out rates exceeding 30% in some countries. This study aimed to investigate the effect of a change in perceived support on intentions to drop out from youth sport at the end of a social support intervention. A pre-intervention examination of the Gaelic Athletic Association (GAA) in 2012 identified a 19.38% drop-out rate involving 3,491 participants between the ages of 12-16 years. A psychosocial intervention developed for the GAA called the Super Games Centre was delivered and evaluated over a 24-week period to 103 participants. The findings demonstrated that higher perceived available support was significantly associated with lower levels of intentions to drop out at the end of the intervention. Furthermore, social identity emerged as a significant mediating factor in explaining the association between changes in perceived support and intentions to drop out. A post-intervention examination in 2018 found that the GAA had established 95 Super Games Centres since 2015, and this has led to an increase in 7,012 new participants between the ages of 12-16 years. Future research and implications for social support intervention methodology are discussed.

### Una intervención basada en el apoyo social para reducir la intención de abandonar el deporte juvenil: el Centro de Superjuegos GAA

### RESUMEN

La investigación ha destacado que el abandono del deporte juvenil se ha convertido en una tendencia mundial con tasas que superan el 30% en algunos países. Este estudio tiene como objetivo investigar el efecto de un cambio en el apoyo percibido sobre la intención de abandonar el deporte juvenil al finalizar una intervención basada en el apoyo social. La Asociación Atlética Gaélica (GAA) en 2012 identificó una tasa de abandono del 19.38% que involucraba a 3,491 participantes de edades comprendidas entre 12-16 años. Una intervención psicossocial desarrollada para la GAA, llamada Centro de Superjuegos (Super Games Centre), se realizó con 103 participantes y se evaluó durante un período de 24 semanas. Los resultados muestran que la percepción de una mayor disponibilidad de apoyo social se asocia significativamente a niveles más bajos de intención de abandono al final de la intervención. Además, la identidad social demostró ser un importante factor de mediación para explicar la asociación entre los cambios en el apoyo percibido y la intención de abandono. Un examen posterior a la intervención en 2018 encontró que la GAA había creado 95 Centros de Superjuegos desde 2015, lo que ha llevado a un aumento de 7,012 nuevos participantes en el mismo rango de edad (12-16 años). Se debaten las investigaciones futuras y las implicaciones para la metodología de intervención basada en el apoyo social.

Over the past decade a rapid increase in research has taken place concerning the role of social support in youth sport. The role of parents, coaches, and peers in creating a climate that promotes and rewards effort and improvement over winning has been shown to predict continued participation in sport (Gardner, Magee, & Vella, 2017). Researchers have highlighted that youth sport participants are most likely to experience positive developmental outcomes when interactions are characterized by positive and informational feedback, appropriate role modelling, and autonomy-supportive

engagement styles (Atkins, Johnson, Force, & Petrie, 2015). Moreover, studies have demonstrated how social support dynamically changes over time and has a significant influence on participation patterns in sport (Laird, Fawkner, Kelly, McNamee, & Niven, 2016; Sheridan, Coffee, & Lavallee, 2014). These findings point to a significant role that social support can play in addressing drop-out from youth sport, with rates exceeding 30% in some countries (Crane & Temple, 2015).

Research is needed to test the effectiveness of social support interventions in youth sport (Balish, McLaren, Rainham, & Blanchard,

Cite this article as: Lavallee, D., Sheridan, D., Coffee, P., & Daly, P. (2019). A social support intervention to reduce intentions to drop-out from youth sport: The GAA super games centre. *Psychosocial Intervention*, 28, 11-17. <https://doi.org/10.5093/pi2018a15>

Correspondence: [d.lavallee@abertay.ac.uk](mailto:d.lavallee@abertay.ac.uk) (D. Lavallee).

ISSN: 1132-0559/© 2019 Colegio Oficial de Psicólogos de Madrid. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

2014). To date, only one study by [Conroy and Coatsworth \(2007\)](#) has used a social support theoretically informed intervention-based approach to assess the effectiveness of a specific intervention or training programme for providing effective support to youth athletes. Further research is needed to examine the relationships between key social (e.g., social identity) and motivational (e.g., perceived autonomy, perceived relatedness, and perceived competency) variables that are involved in the process of dropping out of sport ([Smith, Quested, Appleton, & Duda, 2014](#)). Research is also needed on intervention strategies to target the provision of certain social support behaviors towards youth athletes in order to tackle negative outcomes in sport ([Curran, Hill, Hall, & Jowett, 2015](#)). Such intervention-based research can assist practitioners in facilitating the development of more effective forms of social support in order to effectively tackle negative outcomes in youth sport (e.g., reducing drop-out from sport). Therefore, the aim of this study was to examine whether changes in perceived available social support predict intentions to drop out at the end of a social support intervention and, if so, if these effects are mediated by changes in social identity and/or changes in basic needs satisfaction. It was hypothesized that changes in perceived available social support will predict intentions to drop out with higher levels of perceived available social support resulting in lower levels of intentions to drop out (Hypothesis 1). It was also hypothesized that social identity and basic needs satisfaction will mediate this effect (Hypothesis 2).

### Pre-Intervention Examination

The Gaelic Athletic Association (GAA) is an organization in Ireland that promotes Gaelic games such as Hurling, Football, Rounders, and Handball. The organization is comprised of autonomous bodies responsible for providing games experiences to male and female participants. The Camoige Association and the Ladies Gaelic Football Association, for example, provide oversight for female participation while the GAA focus exclusively on male participation. Combined, these bodies have an extensive local community reach with over 2,000 clubs and 500,000 members ([GAA, 2015](#)).

The GAA has experienced major challenges in safeguarding participation in their sports in recent years. In September 2012, the GAA produced a report reviewing the effectiveness of the GAA's Games Development Strategy ([GAA, 2012](#)). The report highlighted a key barrier in providing meaningful and age appropriated games opportunities across the participation continuum. This barrier related to a 19.38% drop-out rate involving 3,491 male participants between the ages of 12-16 years. The report identified two key contributory factors, which may have been creating the conditions for drop out in the GAA: (1) lack of a developmental ethos – a culture of keeping the best and ignoring the rest as a product of valuing the outcome (winning) – over the developmental process inside and outside sport (achieving one's full potential) and (2) inadequate competition frameworks – too much emphasis on rigidly structured competitions and the absence of a meaningful program of regular and scheduled games.

## Method

### Intervention Design

The research design involved a theoretically-grounded social support intervention (i.e., the GAA Super Games Centre) delivered and evaluated for youth participants aged 12 to 16 years over a 24-week period. Experienced grassroots coaches were recruited and trained specifically to deliver the intervention across 10 location sites in Ireland. These location sites were selected across a range of community support settings, namely, schools, universities, and GAA

clubs. The timing and duration of the intervention was synchronized in line with two key school semester periods (i.e., September-December 2014 and January-April 2015). Over the 24-week period, each site followed an intervention protocol in order to deliver a consistent games experience.

The intervention focused on the two key contributory factors that created the conditions for drop out in the GAA (i.e., the lack of a developmental ethos and the presence of inadequate competition frameworks). A central feature in the intervention design related to modifications to the GAA games experience: Super Game Centres introduced planned modifications to the standard rules. These modifications were informed from six values (i.e., positive feedback, empowerment, belonging, effort, respect, and enjoyment) that have been shown to positively impact youth engagement in sport ([Sheridan et al., 2014](#)). The values acted as a guide to applying modifications to games in order to increase social support (e.g., teams earned additional points for providing positive feedback to teammates and opponents). The use of modified rules within traditional games supports previous research, which has called for the redesign of sport relevant environment in line with the needs of young participants ([Balish et al., 2014](#)). Specifically, this redesign of traditional sport participation experiences involved a process of modifying traditional games environments by changing the sport structure, rules, facilities, and equipment in order to make the participant the highest priority ([Burton, 1984](#)). Examples of such changes include reducing a pitch size (facility), using a smaller ball (equipment), and a rule that everybody must play (regulation).

### Intervention Participants

One hundred and three participants were recruited for this study. For the purposes of recruiting study participants, the following inclusion criteria were applied: males, aged 12-16 years of age, basic skill proficiency in Gaelic Games, and participants who live fewer than 20 minutes by car from their local intervention site. The mean age of participants was 13.6 years ( $SD = 1.2$  years) while the average playing experience was 6.5 years ( $SD = 2.7$  years).

Basic skill proficiency plays a critical role in positively impacting adolescent physical activity levels ([Sallis, Prochaska, & Taylor, 2000](#)). As a result, a decision was taken to ensure that all participants had an existing basic proficiency in Gaelic Games participation in order to ensure that participants had the requisite competence to effectively participate in the games.

The time required to reach a sports facility is a significant factor in influencing recreational sports consumption behavior ([Pawlowski, Breuer, Wicker, & Poupoux, 2009](#)). In light of this, a decision was taken to target young participants within a 20-minute drive time radius from their local intervention site. This approach using drive time regions is in line with previous research exploring the impact of a physical environment on youth sport participation ([O'Reilly, Parent, Berger, Hernandez, & Seguin, 2015](#)).

### Intervention Procedures

**Pilot data collection.** A pilot data collection event was undertaken in two sites before the start of the intervention. This provided an estimation of the time the participants took to finish completing questionnaires. Furthermore, it identified the location of where participants experienced problems in understanding and responding to any questions contained within questionnaires.

**Timing of data collections.** Time 1 questionnaire data were gathered in the first two weeks of the intervention at the start of the school year (i.e., September, 2014). Time 2 data collection took place at the end of the 24-week intervention at the end of the school year (i.e., April, 2015).

**Data collection protocol.** Two field assistants were trained to assist with the collection of data. This was required due to the geographic scale of the 10-site intervention network and the timing of data collection requirements during the intervention. Training for the field assistants addressed how to present the data collection instruments to participants and how to ensure that each child was enabled to fill in the questionnaire without feeling pressured.

Data collection typically took place in a meeting room at the intervention site. Participants completed the questionnaire on their own without conferring with their peers. Participants were informed they could leave out any questions that they did not feel comfortable responding to, all responses would remain confidential, and that their names would not be associated with their responses. The questionnaire took approximately 20 minutes to complete.

**Ethical standards.** The research in all its work operated in accordance with international guidelines for ethical principles of scientific research. No financial incentives were provided to participants for their participation. The parents and participants received information about the project in which it was stated that participation in the project was voluntary and that all information gathered would be treated in confidence.

Children represent a vulnerable under age group not able to provide a legally valid consent to participation in the study. Therefore, children's parents or legal guardians needed to be informed and asked to provide their legal consent. An information sheet and consent form was given to both parents and participants. Both parents and participants had to fill in and complete an informed consent form before the start of the research.

In line with the rights of a child, participants were also given the opportunity to opt out of the study without penalty at any stage during the intervention. This choice was provided despite legal consent being afforded from parents or guardians. A university research ethics committee granted approval of the ethical procedures contained within the intervention.

## Intervention Measures

The following measures were contained in the Time 1 and Time 2 questionnaires: social support, social identity, and basic needs satisfaction. Intentions to drop out was contained in the Time 2 questionnaire.

**Social support.** Participants indicated their perception of available support by completing a 16-item scale developed by Freeman, Coffee, and Rees (2011). The Perceived Available Support in Sport Questionnaire (PASS-Q) enables the accurate assessment of perceived support in order to investigate the longitudinal effect of perceived available support on intentions to drop out. Participants were asked to indicate to what extent certain types of support were available to them (e.g., "provide you with comfort and security"). Items were rated on a 5-point Likert-type scale, ranging from 0 (*not at all*) to 4 (*extremely*). Freeman et al. reported Cronbach's alpha internal reliability coefficients ranging from .68 to .87, composite reliabilities ranging from .69 to .87, and test-retest reliabilities ranging from .73 to .84. Cronbach alpha reliabilities for the global scale of social support (the 16 items combined) in this study were .85 at Time 1 and .93 at Time 2.

**Social identity.** A Four-Item measure of Social Identification (FISI) was used for the purpose of measuring social identity. FISI is an adaptation of the scale reported by Doosje, Spears, and Ellemers (1995) and has good reliability from a longitudinal study research design perspective ( $\alpha = .75$ ). The use of FISI is in line with a recent recommendation, which highlights the internal reliability of the scale ( $\alpha = .77$ ; Postmes, Haslam, & Jans, 2013). Participants were asked to respond to four items (e.g., "I identify with those playing at a GAA Super Game Centre") assessing the strength of connection and

belonging to the GAA Super Game Centre. Cronbach alpha reliabilities for the FISI in this study were .84 at Time 1 and .76 at Time 2.

**Basic needs satisfaction.** Participants were asked to respond to six statements assessing basic need for autonomy (e.g., "I have a say regarding what skills I want to practice"; Standage, Duda, & Ntoumanis, 2003), six items assessing perceived competence (e.g., "I think I am pretty good at this activity") from the Intrinsic Motivation Inventory (McAuley, Duncan, & Tammen, 1989), and five items assessing relatedness need satisfaction (e.g., "I felt listened to") from the acceptance subscale from the Need for Relatedness Scale (Richer & Vallerand, 1998), translating into a single measure of basic needs satisfaction (cf. Standage et al., 2003). The stem for each of the 17 items required participants to respond to a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach alpha reliabilities for the single measure of basic needs satisfaction (the 17 items combined) in this study were .85 at Time 1 and .87 at Time 2.

**Intentions to drop out.** Based on the work of Ajzen and Driver (1992), participants were asked to respond to four items designed to assess the degree to which they intended to drop out of the GAA Super Game Centre. The items were further developed and contextualized for this study from the items utilized by Sarrazin, Vallerand, Guillet, Pelletier, and Cury (2002). Two items measured intentions with regard to continue with, or drop out of, the GAA Super Game Centre (e.g., "I intend to drop out of the GAA Super Game Centre at the end of this season"), and two items measured intentions to continue with, or drop out of, the GAA Super Game Centre next season (e.g., "I am thinking of leaving the GAA Super Game Centre"). The latent variable for intentions to drop out was obtained after reversing the two inversely worded items. The Cronbach alpha reliability for the single measure of intentions to drop out (the 4 items combined) in this study was .82 (at Time 2).

## Intervention Analysis

Basic descriptive statistics, including means, standard deviations, and bivariate correlations, were calculated for the variables of interest (i.e., social support, social identity, basic needs satisfaction, and intentions to drop out). As statistical techniques to test mediation (e.g., Baron & Kenny, 1986) suffer from problems, including low statistical power and a lack of quantification of the intervening effect, non-parametric bootstrapping analyses developed by Hayes (2013) were employed. This analysis estimates direct and indirect effects in models with multiple proposed mediators and has been shown to perform better than other techniques (e.g., Baron & Kenny, 1986) in terms of statistical power and Type I error control (Hayes, 2009). Additionally, as it is not based on large-sample theory, it can be applied to smaller sample sizes with greater confidence (Preacher & Hayes, 2004). To test for mediation, the PROCESS macro for SPSS (Hayes, 2013) was used with 20,000 bootstrap resamples and 95% bias corrected confidence intervals (CIs).

## Intervention Fidelity

Demonstration of intervention fidelity is considered central to the evaluation, comparison, and dissemination of effective interventions (Henggeler, Melton, Brondino, Scherer, & Hanley, 1997; Kalichman, Belcher, Cherry, & Williams, 1997). The following elements were carried out in order to effectively promote fidelity during the intervention: staff recruitment, training, supervision, and production of an intervention manual.

**Recruitment.** Careful recruitment, thorough training and on-going supervision are essential elements to the promotion of fidelity (Yeaton & Sechrest, 1981). Ten qualified local coaches with

the appropriate police vetting were recruited. All of the coaches had considerable knowledge and experience of working with the intervention population. The coaches indicated a willingness to go through a thorough training process and be supervised during the intervention.

**Training.** A training process was designed to ensure coaches had a clear understanding of the intervention that they would conduct. Over a 12-week period coaches completed four full training days, which focused on the principles of the intervention and their application from a social support perspective. As a result, coaches understood the key functional components of social support underlying the coaching support they were to offer in the intervention. Coaches had to display the required technique to offer the right type of support to participants across a range of situations (e.g., promotion of the initiative, pre-session briefing and post-session debriefing). In their training, coaches carried out two live test events whereby they had to deliver a pilot intervention with volunteer groups of children not participating in the research.

**Supervision.** Regular and on-going staff supervision during the intervention was provided, including three supervision sessions each week in order to provide feedback to the coach and their volunteer group. These supervisory visits were randomized and not communicated to coaches in advance. In addition, all of the coaches met on a monthly basis to discuss the issues relative to delivering the intervention. Each week coaches submitted a weekly feedback report which enabled additional training support. This reporting form included key information on the issues experienced in delivering the intervention and the key action tendencies arising from the issues presented.

**Manual.** The intervention was described in a written manual designed to enable the coach to follow a detailed set of instructions. The manual described both the content (e.g., games modifications informed by Super Games Centre values) and process (e.g., emphasis on a developmental ethos) of the intervention as noted in the Intervention Design section above and included key support materials including a weekly reporting form. In addition to these support resources, the manual contained detailed checklists that served as a reminder of the content and process (e.g., confirm facility booking pre-session, implement games modification during each session, and log specific games modifications post-session) to be followed during each weekly games session. Together with the weekly reporting form, these checklists were used during weekly supervision activities in order to monitor the delivery of the intervention.

**Results**

The means, standard deviations, Cronbach reliability alphas, and bivariate correlations for the intervention research variables are presented in Table 1. Correlations among perceived available support, social identity, and basic needs satisfaction suggest the variables are distinct, yet related constructs. In addition, correlations among perceived available support, social identity, and basic needs satisfaction all displayed negative associations with intentions to drop out. Cronbach's alpha internal consistency reliability coefficients for all of the variables exceeded .70.

The association of changes in perceived available support with intentions to drop out post intervention were examined using hierarchical linear regression. Perceived support (Time 1) was entered into the first step of the analysis, with perceived support (Time 2) entered into the second step of the analysis. This was done in order to assess the association of perceived available support at the end of the intervention (Time 2) on intentions to drop out (Time 2) having controlled for perceived available support at the beginning of the intervention (Time 1). In line with Hypothesis 1, the results demonstrated a significant, medium effect for the change in perceived available support on intentions to drop out,  $R^2 = .10$ ,  $\beta = -.33$ ,  $p < .01$ , with higher levels of perceived available support associated with lower levels of intentions to drop out (Table 2).

**Table 1.** Descriptive Statistics for All Variables

	Mean	SD	$\alpha$	2	3	4	5	6	7
1. PS-1	3.60	0.98	.85	.49**	.34**	.22**	.26**	.27**	-.08
2. BNS-1	5.26	0.91	.85	-	.45**	-.49**	.52**	.41**	-.16
3. SI-1	5.17	1.54	.84	-	-	-.40**	.38**	.40**	-.33**
4. PS-2	3.92	0.76	.93	-	-	-	.65**	.66**	-.30**
5. BNS-2	5.44	0.87	.87	-	-	-	-	.60**	-.32**
6. SI-2	5.34	1.22	.76	-	-	-	-	-	-.43**
7. IDO-2	2.00	1.39	.82	-	-	-	-	-	-

Note.  $N = 103$ ; PS-1 = perceived available support Time 1; BNS-1 = basic needs satisfaction Time 1; SI-1 = social identity Time 1; PS-2 = perceived available support Time 2; BNS-2 = basic needs satisfaction Time 2; SI-2 = social identity Time 2; IDO-2 = intentions to drop out Time 2. Cronbach's alpha values appear on the matrix with the mean and standard deviation values; correlations appear above the diagonal;  $t$ -test scores Time 1 and Time 2: BNS = -1.91, SI = -1.16, PS = -2.72\*\*.

**Table 2.** Hierarchical Multiple Regression Analyses Predicting Changes in Perceived Available Support on Intention to Drop Out

Model Support Variable	PS	
	$\Delta R^2$	$\beta$
Step 1 - $F_{(1,94)}$ PS-1	.005	-.073
Step 2 - $F_{(1,93)}$ PS-2	.099**	-.327**
Total $R^2$	.104**	

Note.  $N = 97$ ; PS-1 = perceived available support Time 1; PS-2 = perceived available support Time 2.

The indirect effects of the proposed mediators (social identity and basic needs satisfaction) were examined within two independent bootstrap analyses. Two sets of analyses examined the associations between perceived available support and intentions to drop out at Time 2 having controlled for initial levels of perceived support, social identity, and basic needs satisfaction. Table 3 displays all of the relevant information from these analyses.

Social identity had a highly significant indirect effect on the relationship between perceived available support and intentions to drop out at Time 2. In line with Hypothesis 2, Figure 1 illustrates a full mediation effect via a  $c'$  path coefficient of .003 when the

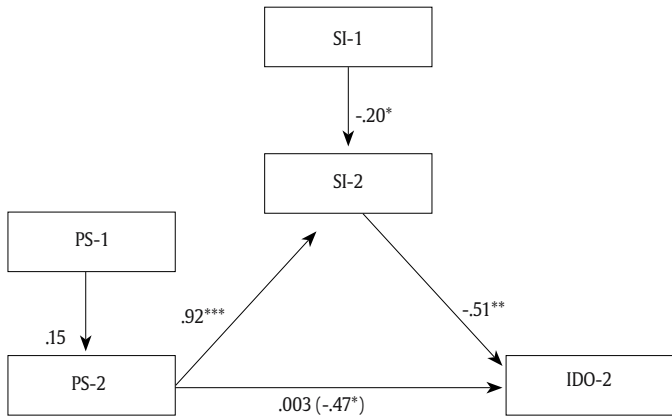
**Table 3.** Summary of Bootstrap Analysis Showing the Indirect Effects of Social Identity and Basic Need Satisfaction on the Association between Perceived Available Support and Intention to Drop Out

Independent Variables	Mediator Variable	Dependent Variables	a path coefficient	b path coefficient	$c'$ path coefficient	Mean indirect effect (ab)	SE of mean	BC 95% CI mean indirect (lower and upper)
PS-2	SI-2	IDO-2	.92**	-.51**	<.01	-.47	.17	-.8528, -.1820
PS-2	BNS-2	IDO-2	.60**	-.38	-.35	-.23	.18	-.6767, .0776

Note. PS-2 = perceived available support Time 2; IDO-2 = intentions to drop out Time 2; BNS-2 = basic needs satisfaction Time 2; SI-2 = social identity Time 2.

\*\* $p < .01$ .

mediator (social identity) is included in the model. Bootstrap analysis further confirms this mediation effect as the bias corrected (BC) 95% confidence interval (CI) as reported in Table 3 does not contain zero. This is in line with a key recommendation concerning the confirmation of an indirect effect using the bootstrapping technique (Preacher & Hayes, 2004).

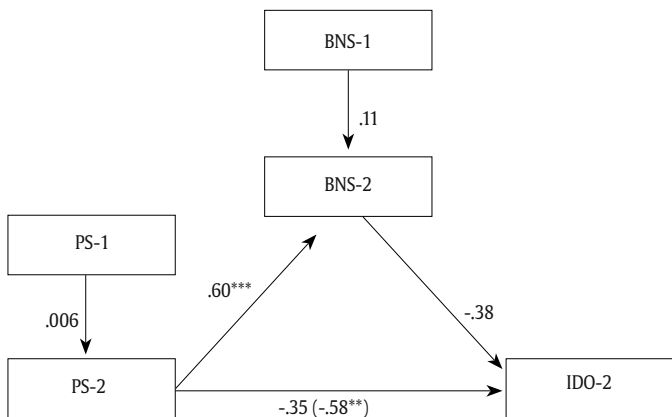


**Figure 1.** Mediation Model Explaining the Relationship between Perceived Available Support and Intention to Drop Out with Social Identity Posited as the Mediator.

Note.  $N = 94$ ; PS-1 = perceived available support Time 1; SI-1 = social identity Time 1; PS-2 = perceived available support Time 2; SI-2 = social identity Time 2; IDO-2 = intentions to drop out Time 2. The c path coefficient is reflected in the value in parenthesis.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

In contrast, basic needs satisfaction had an insignificant indirect effect on the association between perceived available support and intentions to drop out at Time 2. Figure 2 illustrates a partial mediation effect via a c' path coefficient of  $-.35$  when the mediator (basic need satisfaction) is included in the model. Bootstrap analysis demonstrated the presence of zero in the bias corrected (BC) 95% confidence interval (CI) as indicated in Table 3. Although no full mediation effect was found for basic needs satisfaction, it is worth noting that this finding was not as a result of the statistical model being underpowered (.95 for the c' path; Kenny & Judd, 2014).



**Figure 2.** Mediation Model Explaining the Relationship Between Perceived Available Support and Intention to Drop Out with Basic Needs Satisfaction Posited as the Mediator.

Note.  $N = 98$ ; PS-1 = perceived available support Time 1; BNS-1 = basic needs satisfaction Time 1; PS-2 = perceived available support Time 2; BNS-2 = basic needs satisfaction Time 2; IDO-2 = intentions to drop out Time 2. The c path coefficient is reflected in the value in parenthesis.

\*\* $p < .01$ , \*\*\* $p < .001$ .

## Post-Intervention Examination

The GAA has shifted its strategic focus towards a more inclusive and life-long participation ethos in recent years. The 2015-2018 GAA strategic vision "is that everyone be welcome to participate fully in our games and culture, that they thrive and develop their potential, and be inspired to keep a lifelong engagement with our Association" (GAA, 2015). As a result of the intervention findings, the GAA commenced a national roll-out by establishing 65 Super Games Centres in 2016 (Moran, 2016), and this increased to 95 in 2017 (Daly & Walsh, 2017). The first and fourth authors conducted a follow-up examination in January 2018 employing the same procedure used to calculate the 19.38% drop-out rate (3,491 participants) in 2012 and found an increase of 7,012 new participants between the ages of 12-16 years since 2015.

## Discussion

The aim of this research was to investigate if changes in perceived available social support predicted intentions to drop out at the end of a psychosocial intervention and, if so, if these effects were mediated by changes in social identity and/or changes in basic needs satisfaction. Participants in the intervention reported low-to-moderate levels of intentions to drop out at the end of the intervention. This mean score of 2.0 on a scoring range of 1-7 compares well with other studies using the same scale with mean scores of 2.87 (Quested et al., 2014) and 2.70 (Le Bars, Gernigon, & Ninot, 2009), and 2.91 (Sarrazin et al., 2002) reported previously. Overall, bivariate correlations among study variables were of expected magnitude and direction. The negative correlations between intentions to dropout and (1) perceived available support, (2) social identity, and (3) basic needs satisfaction were in line with previous studies involving basic needs satisfaction and intentions to drop out (e.g., Quested et al., 2014).

As hypothesized, changes in perceived available support had a significant main effect on intentions to drop out post-intervention, and this effect was shown to be mediated by a change in social identity over 24 weeks. These findings build on previous research, which has highlighted the importance of examining the interrelationship between key correlates impacting youth sport drop out (Balish et al., 2014). The emergence of perceived available support as a key predictor of intentions to drop out makes a key contribution to the understanding of the role social support in a youth sport drop out context. These findings are supported by sport-specific research which has demonstrated a consistent link between perceived available support and key positive outcomes, namely, performance (Gillet, Vallerand, Amoura, & Baldes, 2010), self-confidence (Rees, 2007), and flow states (Bakker, Oerlemans, Demerouti, Slot, & Ali, 2011). The findings from this study indicate that one's ability to appraise the availability of support plays a key role in drop out intentions from sport. Such a finding is crucial in supporting continued research into the understanding of how support perceptions are formed and the consistency of an individuals' support perceptions across different support providers in a youth sports setting.

The emergence of social identity as a key mediator explaining the association between perceived support and intentions to drop out expands the understanding of key social environment factors in youth sport. This finding is in line with previous calls for research to explore the causal paths underpinning the key fluctuations in social contexts (Felton & Jowett, 2012; Rees, Haslam, Coffee, & Lavallee, 2015). Previous research has highlighted the importance of social identity in influencing the judgements of support (e.g., Haslam, Jetten, O'Brien, & Jacobs, 2004). It is, therefore, perhaps to be expected that the effects of perceived available support are explained through one's social identity. This finding is similar to the results from a recent study in which Coussens, Rees, and Freeman (2015) found that university

athletes perceived specific coaches to be highly agreeable, competent and individuals with whom they share a common identity, while also perceiving these same coaches to be particularly supportive in comparison with other coaches.

These findings concerning perceived support and social identity in the context of predicting intentions to drop out present key implications for social support intervention design. First, the emergence of social identity as a mediating factor explaining the association between perceived support and intentions to drop out merits significant attention. The findings suggest that a shared sense of social identity within a social group positively translates judgments of support through a sense of belonging and purpose. This is in line with previous research that has demonstrated that a shared sense of social identity between perceiver and provider has been shown to explain the giving, receiving, and interpretation of support (Haslam et al., 2004). Given the significance of a shared identity in translating the judgments of support, future social support interventions should consider the selection and cultivation of shared values in order to positively translate support perceptions to alter subsequent outcomes.

As Cohen, Underwood, and Gottlieb (2000) advise, selecting appropriate support strategies from an intervention perspective are not without its challenges. Coussens et al. (2015) demonstrated that when athletes perceive specific coaches to be highly agreeable, competent, and individuals with whom they share a common identity, they also perceive these same coaches to be particularly supportive in comparison with other coaches. Future researchers should, therefore, consider completing a baseline support network assessment on the key relationships underpinning the goal of a social support intervention, as this can ensure that interventions are focused on the appropriate antecedents of perceived support.

Several practical implications emerged based on the study findings, including the development of social skills to enhance support perception and use of social identity to increase group supportiveness. Evidence relating to perceived support highlights the importance of increasing perceived support in youth sport contexts. Uchino (2009) has highlighted that the development of social skills in children and adolescents can lead to the formation of a supportive social network, which can enhance perceived support. Such interventions have been linked to improvements in peer acceptance and support (e.g., Bierman, 1986) and academic outcomes (Dirks, Treat, & Weersing, 2007). The findings relating to social identity also point to a key practical implication whereby the cultivation of a common identity can translate effects of perceived available support. These findings suggest that adults (e.g., coaches) who cultivate a common social identity between them and their participants could help to promote participants' perceptions of them as supportive (Coussens et al., 2015). This might involve practitioners helping coaches to identify values underpinning positive youth sport experiences, such as those delivered through the Super Games Centre intervention (e.g., positive feedback) upon which coaches can translate greater levels of supportiveness in a youth sport setting.

In terms of limitations, the participants were 103 males aged 12 to 16 years from a GAA sport background across 10 Super Games Centres. As Patton (2015) highlighted, purposeful sampling does not necessarily aim to be representative but to establish participant groups who can provide in-depth responses for the research questions, so the results cannot be generalized to other adolescent populations who are different ages or come from other sports. The study design represents another limitation from a methodological perspective. As there was no control group present in the intervention, causality cannot be inferred with regards to the intervention due to the level of support variability presented across the intervention sites. Future intervention-based research should consider the inclusion of randomized controlled groups to assess the effectiveness of social support intervention strategies. Moreover, research has highlighted

the need for controlled interventions to include measures of mediating variables in order to determine if an interventions success can be attributed to changes in the presumed mediators.

## Conflict of Interest

The authors of this article declare no conflict of interest.

## References

- Ajzen I., & Driver B.L. (1992). Application of the theory of planned behavior to leisure choice. *Journal of Leisure Research*, 24, 207-224. <https://doi.org/10.1111/j.1559-1816.2010.00615.x>
- Atkins, M. R., Johnson, M. D., Force, E. C., & Petrie, T. A. (2015). Peers, parents, and coaches, oh, my! The relation of the motivational climate to boys' intention to continue in sport. *Psychology of Sport and Exercise*, 16, 170-180. <https://doi.org/10.1016/j.psychsport.2014.10.008>
- Bakker, A. B., Oerlemans, W., Demerouti, E., Slot, B. B., & Ali, D. M. (2011). Flow and performance: A study among talented Dutch soccer players. *Psychology of Sport and Exercise*, 12, 442-450. <https://doi.org/10.1016/j.psychsport.2011.02.003>
- Balish, S. M., McLaren, C., Rainham, D., Blanchard, C., (2014). Correlates of youth sport attrition: A review and future directions. *Psychology of Sport and Exercise*, 15, 429-439. <https://doi.org/10.1016/j.psychsport.2014.04.003>
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Bierman, K. L. (1986). Process of change during social skills training with preadolescents and its relation to treatment outcome. *Child Development*, 57, 230-240. <https://doi.org/10.2307/1130654>
- Burton, D. (1984). The dropout dilemma in youth sports: Documenting the problem and identifying solutions. In R. M. Malina (Ed.), *Young athletes: Biological, psychological and educational perspectives* (pp. 245-266). Champaign, IL: Human Kinetics.
- Cohen, S., Gottlieb, B. H., & Underwood, L. G. (2000). Social relationships and health. In S. Cohen, L. G. Underwood, & B. H. Gottlieb (Eds.), *Social support measurement and intervention: A guide for health and social scientists* (pp. 3-25). New York, NY: Oxford University Press.
- Conroy, D. E., & Coatsworth, J. D. (2007). Assessing autonomy-supportive coaching strategies in youth sport. *Psychology of Sport & Exercise*, 8, 671-684. <https://doi.org/10.1016/j.psychsport.2006.12.001>
- Coussens, A., Rees, T., & Freeman, P. (2015). Uniquely supportive coaches: Two multivariate generalizability studies of the determinants of perceived coach support. *Journal of Sport & Exercise Psychology*, 37, 51-62. <https://doi.org/10.1123/jsep.2014-0087>
- Crane, J., & Temple, V. (2015). A systematic review of dropout from organized sport among children and youth. *European Physical Education Review*, 21, 114-131. <https://doi.org/10.1177/1356336X14555294>
- Curran, T., Hill, A. P., Hall, H. K., & Jowett, G. E. (2015). Relationships between the coach-created motivational climate and athlete engagement in youth sport. *Journal of Sport and Exercise Psychology*, 37, 193-198. <https://doi.org/10.1123/jsep.2014-0203>
- Daly, P. & Walsh, N. (2017, January). *Better learners make better people and values optimize potential*. Keynote presentation at Games Development Conference. Dublin.
- Dirks, M. A., Treat, T. A., & Weersing, V. R. (2007). Integrating theoretical, measurement, and intervention models of youth social competence. *Clinical Psychology Review*, 27, 327-347. <https://doi.org/10.1007/s00787-015-0727>
- Doosje, B., Ellemers, N., & Spears, R. (1995). Perceived intragroup variability as a function of group status and identification. *Journal of Experimental Social Psychology*, 31, 410-436. <https://doi.org/10.1006/jesp.1995.1018>
- Felton, L., & Jowett, S. (2012). The mediating role of social environmental factors in the associations between attachment styles and basic needs satisfaction. *Journal of Sports Sciences*, 31, 618-628. <https://doi.org/10.1080/02640414.2012.744078>
- Freeman, P., Coffee, P., & Rees, T. (2011). The PASS-Q: The perceived available support in sport questionnaire. *Journal of Sport & Exercise Psychology*, 33, 54-74.
- GAA. (2012). *Mobilising forces, modernising structures and moving with the times*. Gaelic Athletic Association: Dublin, Ireland.
- GAA. (2015). *GAA Strategic Plan 2015-2018*. Dublin, Ireland: Gaelic Athletic Association.
- Gardner, L. A., Magee, C. A., & Vella, S. A. (2017). Enjoyment and Behavioral Intention Predict Organized Youth Sport Participation and Dropout. *Journal of Physical Activity and Health*, 14, 861-865. <https://doi.org/10.1123/jpah.2016-0572>
- Gillet, N., Vallerand, R.J., Amoura, S., & Baldes, B. (2010). Influence of coaches' autonomy support on athletes' motivation and sport performance: A test of the hierarchical model of intrinsic and extrinsic

- motivation. *Psychology of Sport and Exercise*, 11, 155-161. <https://doi.org/10.1016/j.psychsport.2009.10.004>
- Haslam, S. A., Jetten, J., O'Brien, A., & Jacobs, E. (2004). Social identity, social influence and reactions to potentially stressful tasks: Support for the self-categorization model of stress. *Stress and Health*, 20, 3-9. <https://doi.org/10.1002/smi.995>
- Hayes, A. F. (2009). Statistical mediation analysis in the new millennium. *Communication Monographs*, 76, 408-420. <https://doi.org/10.1080/03637750903310360>
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.
- Henggeler, S. W., Melton G. B., Brondino M. J., Scherer D. G., Hanley J. H. (1997). Multisystemic therapy with violent and chronic juvenile offenders and their families: the role of treatment fidelity in successful dissemination. *Journal of Consulting and Clinical Psychology*, 65, 821-833. <https://doi.org/10.1037/0022-006X.65.5.821>
- Kalichman S. C., Belcher L, Cherry C, Williams E. A. (1997). Primary prevention of sexually transmitted HIV infections: Transferring behavioral research technology to community programs. *Journal of Primary Prevention*, 18, 149-172. <https://doi.org/10.1023/A:1024686323746>
- Kenny, D. A., & Judd, C. M. (2014). Power anomalies in testing mediation. *Psychological Science*, 25, 334-339. <https://doi.org/10.1177/0956797613502676>
- Laird, Y., Fawkner, S., Kelly, P., McNamee, L., & Niven, A. (2016). The role of social support on physical activity behaviour in adolescent girls: A systematic review and meta-analysis. *International Journal of Behavioral Nutrition and Physical Activity*, 13(1), 79. <https://doi.org/10.1186/s12966-016-0405-7>
- Le Bars, H., Gernigon, C., & Ninot, G. (2009). Personal and contextual determinants of elite young athletes' persistence or dropping out over time. *Scandinavian Journal of Medicine and Science in Sports*, 19, 274-285. <https://doi.org/10.1111/j.1600-0838.2008.00786.x>
- McAuley, E., Duncan, T., & Tammen, V. V. (1989). Psychometric properties of the intrinsic motivation inventory in a competitive sport setting: A confirmatory factor analysis. *Research Quarterly for Exercise and Sport*, 60, 48-58. <https://doi.org/10.1080/02701367.1989.10607413>
- Moran, S. (2016). Player participation key to new GAA Play and Stay initiative. *The Irish Times*. Retrieved from <https://www.irishtimes.com/sport/gaelic-games/player-participation-key-to-new-gaa-play-and-stay-initiative-1.2505946>
- O'Reilly, N., Parent, M., Berger, I., Hernandez, T., & Seguin, B. (2015). Urban sportscares: An environmental deterministic perspective on the management of youth sport participation. *Sport Management Review*, 18, 291-307. <https://doi.org/10.1016/j.smr.2014.07.003>
- Patton, M. Q. (2015). *Qualitative research and evaluation methods: Integrating theory and practice*. London, UK: Sage.
- Pawlowski, T., Breuer, C., Wicker, P., & Poupaux, S. (2009). Travel time spending behaviour in recreational sports: An econometric approach with management implications. *European Sport Management Quarterly*, 9, 215-242. <https://doi.org/10.1080/16184740903023971>
- Postmes, T., Haslam, S. A., & Jans, L. (2013). A single-item measure of social identification: Reliability, validity and utility. *British Journal of Social Psychology*, 52, 597-617. <https://doi.org/10.1111/bjso.1200>
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, 36, 717-731. <https://doi.org/10.3758/BF03206553>
- Quested, E., Ntoumanis, N., Viladrich, C., Haug, E., Ommundsen, Y., Van Hoye, A., ... Duda, J. L (2014). Intentions to dropout of youth soccer: A test of the basic needs theory among European youth from five countries. *International Journal of Sport & Exercise Psychology*, 11, 1-13. <https://doi.org/10.1080/1612197X.2013.830431>
- Rees, T. (2007). Influence of social support on athletes. In S. Jowett & D. Lavallee (Eds.), *Social Psychology in Sport* (pp. 223-231). Champaign, IL: Human Kinetics.
- Rees, T., Haslam, S.A., Coffee, P., & Lavallee, D. (2015). A social identity approach to sport psychology: Principles, practice, and prospects. *Sports Medicine*, 45, 1083-1096. <https://doi.org/10.1007/s40279-015-0345-4>
- Richer, S., & Vallerand, R. J. (1998). Construction et validation de l'échelle du sentiment d'appartenance sociale [Construction and validation of the perceived relatedness scale]. *Revue Européenne de Psychologie Appliquée*, 48, 129-137.
- Sallis, J. F., Prochaska, J. J., & Taylor, A. C. (2000). A review of correlates of physical activity of children and adolescents. *Medicine and Science in Sport and Exercise*, 32, 963-975. <https://doi.org/10.1097/00005768-200005000-00014>
- Sarrazin, P., Vallerand, R., Guillet, E., Pelletier, L., & Cury, F. (2002). Motivation and dropout in female handballers: A 21-month prospective study. *European Journal of Social Psychology*, 32, 395-418. <https://doi.org/10.1002/ejsp.98>
- Sheridan, D., Coffee, P., & Lavallee, D. (2014). A systematic review of social support in youth sport. *International Review of Sport and Exercise Psychology*, 7, 198-228. <https://doi.org/10.1080/1750984X.2014.931999>
- Smith, N., Quested, E., Appleton, P. R., & Duda, J. L. (2017). Observing the coach-created motivational environment across training and competition in youth sport. *Journal of Sports Sciences*, 35, 149-158. <https://doi.org/10.1080/02640414.2016.1159714>
- Standage, M., Duda, J. L., & Ntoumanis, N. (2003). A model of contextual motivation in physical education: Using constructs from self-determination and achievement goal theories to predict physical activity intentions. *Journal of Educational Psychology*, 95, 97-110. <https://doi.org/10.1037/0022-0663.95.1.97>
- Uchino, B. N. (2009). Understanding the links between social support and physical health. *Perspectives on Psychological Science*, 4, 236-255. <https://doi.org/10.1111/j.1745-6924.2009.01122.x>
- Yeaton W. H., Sechrest, L. (1981). Critical dimensions in the choice and maintenance of successful treatments: Strength, integrity, and effectiveness. *Journal of Consulting and Clinical Psychology*, 49, 156-167. <https://doi.org/10.1037/0022-006X.49.2.156>