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Lessons Learned from a Multi-Level Intervention Program to Reduce Swedish Female Floorballers' Dropout Rate

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ABSTRACT

The purpose of this paper was to describe the development, implementation and outcomes of an intervention program designed to reduce female youth floorballers' (13–18 years) dropout rate over a 2-year period. A strategy, based on a multi-level approach and empirically validated theories of motivation was used in developing and implementing the intervention. Various measures were implemented which may have contributed to the reduction of dropouts. These included: changes to the targeted club policy; hiring a coach responsible for youth sport; forming a youth sport committee and a youth sport group; recruiting a liaison officer who acted as a communication link between various teams, coaches, athletes and the parents; and carrying out an ongoing education program for key stakeholders (i.e., coaches, parents and athletes).

KEYWORDS

Dropout; female; floorball; holistic; intervention; youth

Development of the intervention program

When organized effectively, sport is a setting where youth are able to develop beneficial life skills for example, effective communication, decision making, leadership capabilities, assertiveness, and goal setting (see Weiss, 2019). Such skills are thought to be transferrable to other life domains such as academic or workplace settings (Danish et al., 2004). Additionally, team sport participation has, in particular, been associated with numerous health related benefits, for example improved self-esteem, enhanced social interactions and fewer depressive symptoms (Eime et al., 2013). Given the positive impact of sport on youth participants, efforts to promote sustained participation—that is, to reduce sport dropout—seem worthwhile.

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Swedish youth sport and floorball

In Sweden, where sports are mostly volunteer-based (Green, 2018), more than two-thirds of all children between 7 and 12 years of age participate in organized sports. However, as in many other countries, the dropout rate increases precipitously between 13 and 14 years of age and continues fairly steadily until early adulthood, when attrition rates typically level off (e.g., Carlman et al., 2013). This trend is particularly evident among girls (Swedish Research Council for Sport Science [SRCSS], 2019). In floorball, the second most played sport among Swedish youth, approximately 30–35% of the athletes dropout annually prior to early adulthood at age 20 (e.g., Balish et al., 2014; SRCSS, 2019). Evidence also suggests that fewer Swedish girls than boys start playing sports and that the former are more likely to cease their sport participation at an earlier age (SRCSS, 2019). Given the recognized health related benefits of sport participation (Eime et al., 2013), there is a clear need to prevent adolescent girls from withdrawing. In line with Gould and Petlichkoff (1988), in the current project, we defined dropout as the prolonged absence of systematic practice and competition in floorball.

Needs assessment

In order to curtail female adolescent dropout from floorball we collaborated with a floorball club located in a Southern Swedish town of approximately 100,000 inhabitants. The club consisted of 700 members and oversaw 36 teams, of which 22 were youth teams (10 female teams and 12 male teams; 7–18 years of age). The female senior representative team participated in the highest league while the men's senior representative team competed in the second highest league in Sweden. The idea for this project partially originated from a state-funded project (The Sport Lift), in which sport clubs were encouraged to seek funding to implement projects that prevented children and youth especially girls from quitting sports. The impetus for the current project also came about as a result of a policy change in 2012, when the Swedish Floorball Federation (SFF), sought to reduce the dropout rate by encouraging floorball clubs throughout Sweden to replace the pyramid approach (i.e., a focus on developing elite athletes through youth talent identification processes and selection procedures) with the Swedish Floorball Developmental Model (SFDm; Swedish Floorball Association [SFA], 2020). The latter was influenced by the Long-Term Athlete Development Model (LTAD) (i.e., provide age-specific and appropriate training plans, and competition and recovery schedules to optimize their sport experience; Balyi & Hamilton, 2004; Canadian Sport Centers, 2007). The SFDm emphasizes that all individuals should have the opportunity to initiate and return to floorball participation at any age and to

choose one's participation level. In addition, proponents of the SFDM model advocated that youth should participate in a variety of sports, avoiding sport specialization, until late puberty. This significant shift in the structure of Swedish floorball, was part of a broader strategy at a national level to diminish youth dropout from floorball and to create greater possibilities for talented youth to achieve elite status. Since the first author was a voluntary coach of his daughter's representative team at the commencement of the project, he was aware of the challenges that this particular club had with female player retention. Within this context, the first author sought funding from SFF to initiate the project focused on reducing female floorballers' dropout rate.

In line with this objective, the first author contacted the chairman of the board and the sport manager of the floorball club in order to present the key objectives of the project, to garner support/permission to conduct the intervention, and to solicit input on how to best implement the project within the club-setting. After receiving funding from The Sport Lift, through SFF, and from the municipality in which the club was located, the first author was granted permission by the club to conduct the intervention. Following receipt of informed consent from athletes, coaches and parents to take part in the educational intervention, a *project leader* was recruited for a two-year, .20 position, in order to run the project and implement the required administrative tasks. This individual was a male with a Bachelor Degree in Sports Coaching completed at the research team's university. The project leader was instrumental in planning, implementing and evaluating many of the activities comprising the intervention, in particular, the educational component and ongoing liaising with the coaches, athletes and parents.

The project involved 85 female athletes aged 13–18 years (participating on six separate teams), 15 coaches (all males) and 80 parents. In order to evaluate the program, that took place between the Fall of 2015 and 2017, the third author took field notes throughout the project and conducted informal interviews with the majority of athletes (80–90%), coaches (100%), and a minority of the parents (20–30%).

Purpose of the project

The overarching purpose of this project was to implement a program designed to reduce female youth floorballers' (13–18 years) dropout rate over the course of a 2-year period. The purpose of this paper is to (1) describe the development of the intervention program, (2) to present a detailed description of the implementation of the program, and (3) to reflect on the implementation process and the outcome (i.e., female athletes' dropout rate) of the intervention program.

The design and theoretical foundation of the project

Researchers have repeatedly called for more theoretically oriented and integrated approaches when studying dropout issues (see Allan et al., 2018; Balish et al., 2014). Additionally, the need to conduct interventions over an extended period of time has also been highlighted (Crane & Temple, 2015). In addition, since an athlete's decision to quit sports is not taken in isolation but is also influenced by several contextual factors existing at multiple levels it has been suggested that there is a need to use multi-level models (e.g., social ecological model, Balish et al., 2014) to frame correlates of sport attrition (Fraser-Thomas et al., 2018). In line with the suggestions mentioned above, we (the first and third author/project leader) developed a two-year longitudinal intervention program using a *multi-level approach* of sport attrition (Balish et al., 2014). Moreover, the intervention was informed by key assumptions of Achievement Goal Theory (AGT; Nicholls, 1989, Ames, 1992), Self-Determination Theory (SDT; Deci & Ryan, 2000), and Caring Climate concepts (CC; Fry & Gano-Overway, 2010). In addition, we included basic principles from the LTAD and Parent Involvement Model (Canadian Sport Centers, 2007), coaching effectiveness training (CET; Smith & Smoll, 2002), concepts of the TARGET acronym (Roberts & Treasure, 2012) when structuring the intervention program (see Figure 1 for an overview of the design of the program).

Figure 1 highlights that correlates of female youth sport attrition exist at multiple levels (i.e., policy level, community level, institutional level, inter- and intrapersonal level) that interact with one another and that influence the female athlete's decision to remain involved in or drop out of sport. Accordingly, we used strategies at each of the successive levels, based on theories and models highlighted above.¹

Implementation of the program

Policy level

After recruiting a project leader, we collaborated with board members of the targeted floorball club to re-write the club policy document in accordance with the SFDM and LTAD. Since floorball, as other invasion ball sports, can be classified as a late specialization sport (Balyi & Hamilton, 2004), one of the major policy revisions was to highlight the importance of adopting a late specialization approach. Another key revision included encouraging coaches to not only accept but encourage participation in sports other than floorball and to allow athletes to play games even if they missed one or more training sessions. These two modifications were important, since previous research has shown that early specialization, often in combination with extensive deliberate practice, is associated with

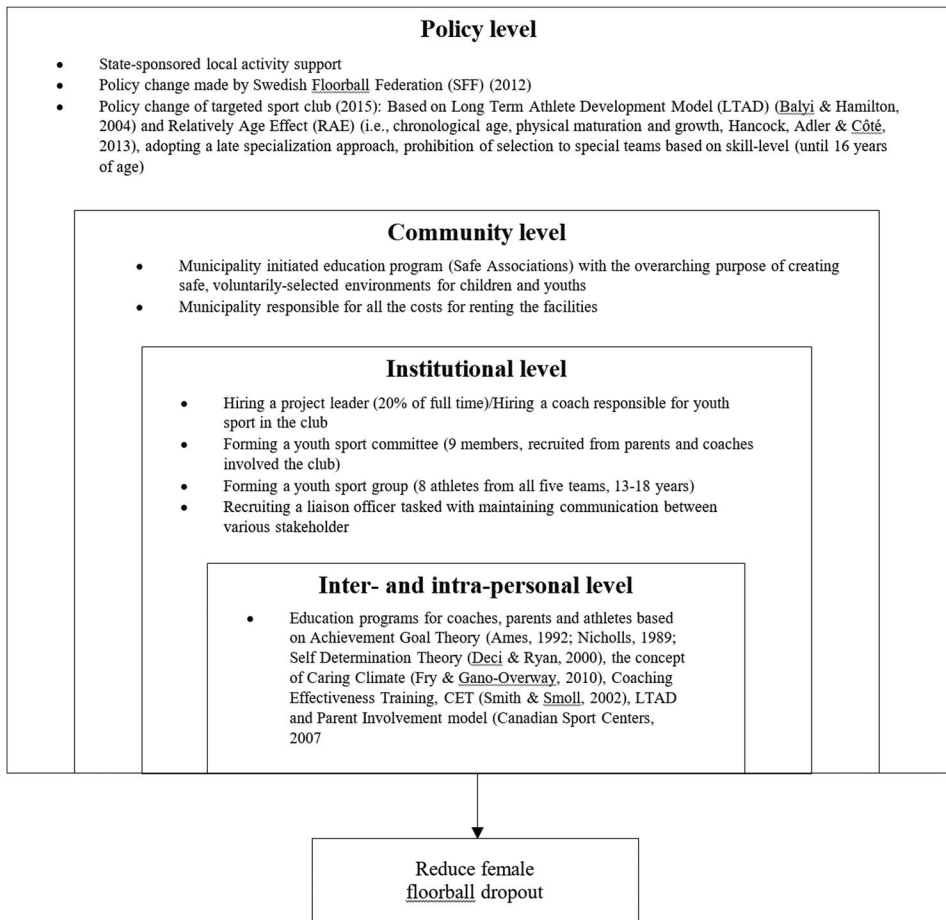


Figure 1. A schematic model over the intervention program.

various negative consequences, such as increased prevalence of overuse injuries, burnout and dropout (see Côté et al., 2013). In line with LTAD, and in conjunction with club officials, we also clarified in the policy document that specialization and more extensive deliberate practice was prohibited until athletes turned 16 years old. It was also stipulated that separating athletes into different groups based on skill-level was not allowed until athletes were 16 years of age. This latter decision was based on research demonstrating a relative age effect (RAE). A RAE occurs when youth are clustered into groups based on chronological age, and those born earlier in an age group have participation and performance advantages compared to youth born later in the age group, given the former's increased physical maturation and growth (Webdale et al., 2020). RAE has been shown to significantly increase the risk of dropout, likely because those born earlier in an age group are more often selected to play in the best teams, to have the best coaches, to secure the best positions and to

receive more training and playing time. Such advantages may help account for drop-out among non-selected athletes, a situation we sought to address with the current program (Cobley et al., 2009).

Community level

The athletic education program (presented below) was part of a larger education program initiated by the municipality called Safe Associations with the overarching purpose of creating safe, voluntarily-selected environments for children and youth to take-part in (i.e., free from discrimination, bullying, abuse and sexual harassment). In order to get certified as a

Safe association, the targeted sports club was required to develop an action plan describing how to prevent socially destructive behaviors (e.g., educating coaches, parents and athletes on preventing mis- or unfair treatment) and how to deal with them if they occurred (e.g., to confer with members of the board, who would then gather and communicate with relevant parties). All organized sports clubs in Sweden annually receive state-sponsored local activity support, regardless of whether they have been certified as a Safe Association or not. In addition, the municipality, in which the club was located was responsible for all the costs for renting the facilities in which the teams of the overarching club trained and competed. This meant that the club could maintain minimal fees so that most individuals could afford the membership and training costs.

Institutional level

To increase the likelihood the revised policy was followed by all floorball coaches, and in an effort to deal with questions pertaining to club procedures and strategies (e.g., arrangement of youth tournaments, player development strategies, applications for funding), the second step was to form a *youth sport committee* including nine members (seven males, two females), who were recruited from parents and coaches involved in the club. Furthermore, the project leader was commissioned to attend selected matches to observe whether parents and leaders had adopted the values that were expressed in the policy. A *youth sport group* was also formed, including eight athletes recruited from all five girls' teams in the targeted age range (13–18 years). The purpose of the group was to create a forum where members could address club-specific topics, for example, how best to structure and conduct practices and team activities (e.g., social activities, tournaments), and to discuss challenges or areas in need of improvement in order to prevent female athletes from dropping out of the club. Issues that arose in these discussions could then be addressed in the youth sport committee.

In addition to the project leader, we recruited a *liaison officer* tasked with maintaining communication between various stakeholders (e.g., coaches from different teams, coaches and athletes, coaches and parents). The liaison officer assumed various responsibilities such as (but not limited to): facilitating decisions to allow players to train with athletes at a higher level (for youth 16 years and above), engagement with athletes identified as at risk for dropout, and service on the youth sport committee.

Inter- and intra-personal level

In order to develop coaches', parents' and athletes' knowledge on how to foster behavior change strategies for preventing dropout, an education program comprised of different strategies was implemented. An overview of the education program is presented in [Table 1](#). The table includes the learning objectives, content and pedagogical activities of each session, as well as associated theories and models used to guide each session. The program was based primarily on Achievement Goal Theory (AGT; Ames, 1992; Nicholls, 1989) and Self-Determination Theory (SDT, Deci & Ryan, 2000) - two of the most empirically tested and validated motivational theories for studying interactions between environmental factors (e.g., verbal and non-verbal feedback from coaches, parents and teammates, the motivational climate) and intra-individual motivational patterns. As a vast body of research has consistently demonstrated that the initiation of a mastery-focused (i.e., an emphasis on effort, personal improvement, learning and cooperation) and autonomy-supportive climate (i.e., provision of choices, placing value on self-initiation, promotion of independent problem solving), are related to numerous adaptive and desirable outcomes (e.g., intrinsic motivation toward sports, enjoyment, positive affect and persistence in organized sports; Standage & Ryan, 2012), we chose to base the main parts of the education program on these theoretical premises. Another important aspect of the motivational climate may be the degree to which the coach cares for and respects the athletes (Fry & Gano-Overway, 2010). Research has shown positive relationships between a caring-initiated climate (e.g., when coaches and athletes value, care for, and respect one another) and more positive attitudes toward coaches/teammates, higher enjoyment, and greater commitment to sports (Fry & Gano-Overway, 2010). Given these findings, the current research team also sought to incorporate caring climate principles into the educational program.

Coach education program

The education program for the coaches was carried out during year one of a two-year intervention period. The education component was

implemented by the project leader on six different occasions over a 6-month period during year one. Each education session lasted between 45–60 minutes and was held in the same training facility as the floorball training sessions (see [Table 1](#)). All team's coaches ($n=15$) were invited to participate in the education program. The majority ($n=10$) of coaches participated in all sessions, with the remainder participating in one ($n=3$) or two ($n=2$) sessions. “Time” was expressed as the main reason why coaches chose not to attend each session. The content of each session is presented in greater detail below.

During the first coach session, coaches were informed and asked to reflect on the key elements of the SFDM and LTAD models, along with the importance of considering the relative age effect, the risk of early specialization and the advantages of adopting a late specialization approach. A key issue discussed in Session 1, was how much playing time players of “lesser ability” should be given and when such individuals should be allowed on the floor (e.g., critical game situations). Several coaches expressed concern that giving too much playing time to players of lower ability and at key moments in the game could create team friction in the event such athletes were making mistakes. The first session was concluded by highlighting and discussing policy changes (see policy level), where the project leader emphasized the importance of allowing athletes to participate in several sports and letting them miss certain training sessions if they were engaged in other sports, without any ramifications for game selection.

In the second coach session, the key concepts of AGT, SDT and a caring climate were highlighted in relation to motivation and dropout. Each theoretical concept was linked to a practical example. For example, as an introduction to AGT, coaches were asked which of the two following definitions of success, they wanted their athletes to subscribe to: 1) The athlete feels most successful in sport when she outperforms her friends or when she is the best or better than others while expending equal or less effort (i.e., ego oriented). 2) The athlete feels most successful in a sport when/she learns a new skill by trying hard, managing to execute skills she has been unable to do previously or when she is doing her best. This reflection exercise was followed by a discussion of whether ego or task orientations were independent of one another (i.e., orthogonal), whether it may change from moment to moment (i.e., goal involvement) and whether it depends on environmental cues (i.e., motivational climate).

In the third coach session, coaches were initially informed about the basic concepts of the TARGET acronym (Roberts & Treasure, 2012) (i.e., Tasks (T): vary the exercises and groups; Authority (A): involve athletes in decision making; Recognition (R): recognize and reinforce improvement; Grouping (G): promote movement between groups and create

Table 1. An overview of the education program.

Sessions	Theories/ Models	Learning Objectives	Content	Activities	Time
Coaches Session 1	LTAD SFDM	Develop a basic understanding of SFDM and LTAD Develop knowledge about the new club policy Develop an understanding of the consequences that RAE and early specialization may have on dropout Support late specialization No athlete segregation into separate teams until the age of 16	Information of the basics of SFDM and LTAD Information regarding the new club policy Information and reflections regarding potential negative consequences of early specialization and RAE	Lecturing and group discussions	60 min
Session 2	AGT SDT CC	Develop a basic understanding of AGT, SDT and Caring Climate (CC) and how athletes' perception of those forms of coach initiated motivational climates are related to athletes' motivation, well-being and intentions to dropout	Information and reflections on the key concepts of AGT, SDT and CC in relation to motivation and dropout	Lecturing and group discussions	60 min
Session 3	TARGET	Develop a basic understanding of the concepts of the TARGET acronym and to be able to use the concepts to create a mastery-involved climate	Information, instructions and reflections on using the TARGET acronym when structuring training sessions in order to create a climate emphasizing effort, personal improvement, learning and cooperation	Lecturing and group discussions	45 min
Session 4	AGT SDT CET	Develop a basic understanding of, and be able to provide feedback based on CET, in order to create a mastery involved and an autonomy-supportive climate	Instructions and reflections on using CET when structuring training sessions	Lecturing and group discussions	45 min
Session 5	CC	Be able to notice and prevent instances of bullying, abusive or discriminatory behaviors in one's own teams Be able to create a caring climate	Information and instructions on prevention of bullying, abusive or discriminatory behaviors in one's own team Instructions and reflections on creating a climate that is inviting, respectful, inclusive, supportive and safe	Lecturing and group discussions	45 min
Session 6 & 7	AGT SDT CET	Be able to provide feedback in order to create a mastery involved and autonomy-supportive climate	Observations followed by reinforcement of behavior when coaches are giving feedback that initiates a mastery involved and autonomy-supportive climate	Practical drills and one-on-one discussions	60 min each session
Session 8		Consolidate knowledge from previous sessions	Reflect on issues or problems related to aforementioned educational content	Group discussions	45 min
Parents Session 1	LTAD SFDM	Develop knowledge about adoption of the new club policy Develop an understanding of the consequences that RAE and early specialization may have on dropout To encourage late specialization where the child remains in the current team until the age of 16	Information regarding the new club policy Information and reflections regarding potential negative consequences of early specialization and RAE Information regarding the advantages of late specialization and to the value of not segregating athletes into separate teams	Lecturing and group discussions	40-45 min

Session 2 & 3	AGT SDT CC	Develop a basic understanding of how children's perception of different forms of parent initiated motivational climates (i.e., autonomy/controlling, mastery/performance, caring/non-caring) are related to children's motivation, well-being and intentions to dropout	Information and reflections on the key concepts of AGT, SDT and CC in relation to motivation and dropout Instructions on how to ask questions that promote a perceived parent mastery/autonomy-supportive environment Information on promoting a caring climate	Lecturing and group discussions	40-45 min each session
Session 4	AGT SMART	Develop a basic understanding of how to use goal setting strategies to help one's child set/adopt self-referenced and SMART goals Develop strategies to help one's child cope with everyday stressors and to be well-prepared for training and games Become more aware of one's own and others' behavior as sports parents	Instructions and reflections on how to teach one's child to set/adopt self-referenced and SMART-goals Instructions on how to help one's child cope with stressful events and get prepared for training/games	Lecturing and group discussions	40-45 min
Session 5	LTAD PIM	Develop a basic understanding of how to reach an optimal level of parent involvement	Instructions and reflections on how to optimize the level of parent involvement in sports Encouraged to watch and reflect on how they and other parents behave before, during and after games/practices prior to the next session	Lecturing and group discussions	40-45 min
Session 6	LTAD PIM SDT	Develop a basic understanding of the concept of parental pressure and how to prevent it Develop a deepened understanding of how to initiate an autonomy-supportive motivational climate	Information and reflections on how different types of motivation, along a continuum of self-determination, are related to children's thoughts, emotions and decisions to continue or drop out of sports Information and reflections on why, when and how parental pressure is perceived, and how to prevent it	Lecturing and group discussions	40-45 min
Athletes Session 1	CC	Develop a basic understanding of the concepts of bullying, discrimination, abuse and harassment Be able to create a caring and trustworthy peer motivational climate Develop a knowledge of where to turn to in case one is perceiving any mis- or unfair treatment in the team or in the club	Information and reflections about concepts of bullying, discrimination, abuse and harassment and how to prevent this from happening Instructions and reflections on how to create a caring and trustworthy peer motivational climate Information about who to contact in case of any mis- or unfair treatment	Lecturing and group discussions	45 min
Session 2		Develop a basic ability of moral reasoning. Dare to take a stand and develop the ability to express one's opinion, justify one's position, listen and be listened to by others	Conversations about the current situation on their team and how they like to be treated by their teammates and the coach Conducting the practical exercise: "Four Corners"	Group discussions and practical exercises	60 min

Note: LTAD = Long Term Athletic Development Model; SFDM = Swedish Floorball Developmental Model; RAE = Relative Age Effect; AGT = Achievement Goal Theory; SDT = Self Determination Theory; CC = Caring Climate; TARGET = Tasks-Authority-Recognition-Groups-Evaluation; CET = Coaching Effectiveness Training; SMART = Goal setting strategy (Specific, Measurable, Acceptable, Realistic and Time-Bound goals); PIM = Parent Involvement Model.

heterogeneous and diverse groups; Evaluation (E): based on improvement and self-referenced criteria, Time (T): provide sufficient time for each exercise), followed by instructions and reflections on how to implement them in practice. Much of the discussion in session three centered on the difficulties of involving athletes in the planning of the training sessions (e.g., when, how often, what parts of the training session should athletes be allowed to take responsibility for) and when and how to best create groups. The coaches were encouraged to give attention to athlete regardless of performance level, and to provide individualized feedback based on each athlete's skill level.

In the fourth coach session, the project leader gave the coaches' instructions and reflected on how to implement coaching effectiveness training (CET) during training sessions (e.g., provide reinforcement, give encouragement immediately after mistakes, give technical instruction, avoid punitive instruction, avoid being sarcastic, not punish when things are going wrong). Coaches were encouraged to provide one another feedback on how well they succeeded in implementing CET in practice (e.g., during the team's training sessions and during games). At the completion of the session, the project leader observed the coaches and provided them feedback regarding the effectiveness of coach feedback to their athletes.

Initially, in the fifth coach session, the project leader defined central concepts (e.g., bullying, harassment, sexual abuse) followed by a group discussion about the possible occurrence of these behaviors in the teams/club. Next, instruction on how to prevent anti-social behaviors was provided (e.g., create a caring climate by being attentive and treating all team members with kindness, genuine respect, and caring about them as people, not just as athletes). Lastly, information and instructions on how to respond to any potential antisocial behaviors was discussed (e.g., react early and intervene when children and adolescents use derogatory language or violate one another's dignity).

The sixth and seventh coach session was dedicated to practical exercises (conducted during two training sessions per team) in which the project leader observed the coaches during team activities and discussed leadership-related issues with each coach (e.g., reinforcing behavior when coaches were giving appropriate feedback). In the eighth and final coach session concepts and practical exercises highlighted during previous sessions were reviewed and issues or problems related to any of the educational content were discussed. For example, we talked about difficulties knowing when and how often one should provide feedback (e.g., immediate reinforcement with sincerity; Smith & Smoll, 2002) and how to deal with "problem" athletes (e.g., establish clear behavioral guidelines by collectively establishing team rules; Smith & Smoll 2002).

Parent education program

The education program for parents was implemented in six sessions for each team – four sessions spanning a 6-month period during the first year of the program and two sessions (spanning 2 months) during year two of the program. As with the coach education program, all parent sessions were held by the project leader in the same floorball training facility. Overall, 95% ($n=80$) of the parents attended at least one of the sessions, and on average, 60% of the parents attended the program on each occasion. In order to attract as many parents as possible, each education session was held 60 minutes prior to their child's game, which made it possible for parents to take part in the program while waiting for the game to commence. Each education session lasted between 40 and 45 minutes (see [Table 1](#)).

The first parent session started with a brief presentation of the project followed by a discussion of the revised policy document (see policy level in [Figure 1](#)). The presentation included points relating to early versus late specialization, information on the RAE and its implications, and a rationale for not streaming children based on ability, until 16 years of age. As was the case for the initial coach education session, discussions centered on equitable playing time (regardless of player's athletic ability or the frequency of attendance at training sessions), and the importance of not allowing the best players to accelerate to older squads.

In the second and third parent sessions, practical guidelines in line with AGT and SDT were presented and discussed (e.g., the project leader suggested that parents ask their children if they had fun and whether they had learnt anything, rather than asking about the score or how many goals their children scored; to let their children make their own choices regarding attendance at specific training sessions). The project leader also gave information on prosocial behaviors that parents could exhibit toward coaches, other parents, athletes and referees in an effort to promote a caring motivational climate (e.g., support referee decisions, cheer but not coach, acknowledge all children in the teams, never laugh or yell at any child for making a mistake).

The fourth parent session commenced with a brief review of concepts and key points that had been highlighted at previous sessions. Next, the project leader introduced parents to the notion of setting SMART-goals (i.e., to set specific, clear and measurable goals, that are accepted by the child, and are realistic and time-bound). The session concluded with several practical tips and statements that parents could incorporate in their interactions with their children (e.g., focus on self-referenced goals and definitions of success, personal development rather than a primary emphasis on results, being a parent-not a coach, helping one's child plan their day in order to get sufficient sleep, time for friends, and homework).

The project leader initiated the fifth parent session with a presentation of the prevalence and importance of parent involvement in youth sport. Thereafter, a model which was based on LTAD and the Parent Involvement Model (see Canadian Sport Centers, 2007, p. 6) was presented and discussed. Proponents of the model suggested that children's degree of satisfaction in sport would be related to their parents' level of involvement. In the optimal zone of involvement, parents are reactive, active and proactive in their children's sport (e.g., react to mistreatment; cheer and support the child despite ups and downs; initiate and maintain good relationships with the coaches). In contrast, having either opposed and/or inactive parents - or on the other end of the continuum, hyperactive parents - would according to the model, diminish children's intrinsic motivation and satisfaction with their sport. Prior to the sixth session, parents were encouraged, when possible, to watch and reflect on how they and other parents behaved prior to, during and after games and practice (e.g., in the car, at the dinner table, as a spectator/in the audience) and how such behaviors might impact the athletes involved.

During the sixth parent session, parents' informal observations of one another, and of the parents with children from opposing teams were discussed and related to the LTAD and Parent Involvement Model (Canadian Sport Centers, 2007). In particular, the importance of being a present (i.e., reactive, active and proactive) but not overinvolved or inactive parent was highlighted. Among other things, suggestions were articulated regarding constructive ways a parent could behave in the car after a match, or around the dinner table. For example, parents were encouraged to let the child control whether he or she wanted to discuss sports, and if so, what the discussion should focus on. Secondly, in an effort to develop parents' basic understanding of the concept of parental pressure we examined questions such as, why, when and how parental pressure may be experienced. We employed Leff and Hoyle's (1995, p. 190) definition of parental pressure, namely "...behavior perceived by their children as indicating expectations of unlikely, even unattainable heights of accomplishment." Such behaviors could entail things like yelling at the child when making a mistake, forcing the child to go to practice, or buying expensive equipment. In addition, we expanded upon the importance of autonomy and social support, by providing information and reflections on how different types of motivation, are related to children's thoughts, emotions and participation decisions. The session finished with practical tips on how to create an autonomy-supportive and non-pressuring parental climate (e.g., being supportive, having a permissive attitude, avoiding getting involved in training and games, and not criticizing).

Athlete education program

In an effort to foster perceptions of psychological safety among the athletes, the project leader invited each of the five floorball teams to participate in two education sessions lasting 45–60 minutes each (see Table 1). In the *first athlete session*, athletes were asked to discuss concepts such as bullying, discrimination, abuse and harassment (i.e., What does it mean? When does it occur? Why does it occur?), followed by suggestions on how to define these concepts. The cornerstones of a caring climate (Fry & Gano-Overway, 2010) were also presented. The session ended with information about the updated policy (see policy level) and who to turn to in the event athletes perceived any mis- or unfair treatment (e.g., being bullied, abused, sexual harassment).

In the *second athlete session*, athletes conversed about the current situation on their team and how they wanted to be treated by their teammates and the coach in order to create a caring and safe climate. A practical exercise (Four Corners) was conducted, with the overarching objective of cultivating athletes' moral reasoning. More specifically, the objective with the exercise was to develop the ability to “dare to take a stand,” to express their opinions and justify their positions, and to listen to and be heard by others. Athletes were asked to take a stand in relation to six different statements (e.g., “I dare to intervene if I see someone who, for example, gets offended”) and were given four alternative answers for each question (i.e., “Yes,” “No,” “Maybe” and “Personal proposals”). Each answer option had its own corner in the room. The athletes took a stance by choosing the corner that best represented their opinion/response option. This exercise facilitated athlete engagement in difficult conversation issues and topics.

Lessons learned and recommendations

In tracking participation rates over the course of the 2-year project, it was evident that only 9 of the 85 (11%) athletes dropped out of the targeted sport club. Although male counterparts in the club who were similar in age to females ($n = 172$) were also likely influenced by the revised policy, we found that 47 (27%) of them dropped out over the course of the project. Thus, in comparison to the males in the club and previous research citing annual sport dropout rates of 30–35% (Balish et al., 2014; SRCSS, 2019), the females participating in our program appeared to have comparatively lower dropout rates. Given the non-experimental design of our program, the specific reasons for the relatively low drop-out among the particular target group remain somewhat speculative. However, based on the informal interviews with coaches, parents and the project leader, we believe there is an association between our intervention program and the relatively low drop-out rate.

Our experiences and recommendations based on implementation of this intervention program are summarized below. As indicated previously, the intervention targeted different levels of the club system highlighted in the multi-level model (see [Figure 1](#)), likely elicited synergistic effects (see [Balish et al., 2014](#)). Consequently, we suggest that scholars include all levels when structuring an intervention program, with particular emphasis on the educational component as it may have the substantial influence on key stakeholders (e.g., coaches, parents and athletes). There may also be value in incorporating a project leader, a role that was centrally important in structuring the educational program and maintaining communication between parties in the current intervention. Although this is an investment that may require considerable costs, it is one that may prove invaluable reducing dropout, in circumstances where this is feasible. Third, we recommend examining of club policies, an undertaking that in the current intervention led to substantive revisions in the club policy in accordance with LTAD ([Balyi & Hamilton, 2004](#)). By addressing early specialization and the segregation of athletes into different groups, we believe our intervention was effective in preventing structural problems that have been shown to significantly increase athlete dropout ([Cobley et al., 2009](#); [Côté et al., 2013](#)).

A further suggestion relates to the establishment of a youth sports committee to increase compliance with the policy document and address other pertinent issues related to youth sport activities. We felt that merely rewriting the policy – in the absence of actions taken to ensure compliance with it – would be insufficient to ensure tangible changes with respect to coach, athlete and parent behaviors likely impacting athlete dropout. For this reason, the establishment of a youth sports committee – was instrumental in serving a “watch-dog” role, in which policy violations could be reported and enforced. While such violations were relatively infrequent, some policy infractions did occur (e.g., coaches selecting skilled athletes who were yet to turn 16 years old; parents shouting unfavorably to opposing team’s players). Fortunately, no such actions eventuated, perhaps in part because youth committee members discouraged coaches and parents from acting against the policy.

In addition, we recommend that the education sessions are directly informed by empirically-tested motivation theories, such as AGT, SDT, and caring climate concepts ([Deci & Ryan, 2000](#); [Fry & Gano-Overway, 2010](#); [Nicholls, 1989](#)) since the use of these theories helped us develop educational content that was clear, evidence-based, and targeted specific concepts and objectives. Indeed, feedback on the program from coaches, parents and athletes suggested that they appreciated receiving guidance on *how* to implement key concepts and that they valued receiving content

that was supported by research findings and statistics. For example, informal conversations with parents, both immediately after some of the education sessions and after parents dropped off their children for training or matches, indicated that parents were greatly appreciative of the content and clarity of the education sessions. Similarly, discussions with athletes revealed that many of them indicated the sessions dealt with salient issues, in particular, discussions surrounding the creation of a mastery-oriented and caring climate and how to optimally respond to others on the team. Moreover, many athletes indicated that the education sessions, were a welcome break in their regular activities.

As far as the educational efforts targeting coaches, we note that one-third of the coaches participated on only one or two occasions. Given the voluntary nature of coaches' participation in the intervention, we felt we could not mandate involvement in all educational sessions. In order to increase coach involvement in the education sessions, we advocate having coaches involved to a greater extent in the initial development of the educational materials. For example, during the educational sessions, coaches indicated that they would have liked more concrete tips on age-appropriate physical training exercises that they could implement during their training sessions with athletes. With regard to the parental educational sessions, parental comments revealed the value in keeping sessions relatively brief (i.e., 40–45 minutes) and minimizing attendance barriers by scheduling sessions prior to the commencement of their child's games (see Vincent & Christensen, 2015).

Given our experience of the value of a liaison officer in ensuring on-going and open communication between relevant stakeholders, researchers and practitioners may consider incorporating such a role into their intervention efforts. The officer's regular contact with various squads, helped the research team gauge the atmosphere in those teams, and communicate with the project leader and the youth sport committee, regarding coach, athlete or parent deviations from the revised policy. In such instances, appropriate actions could be taken (e.g., conversations with players, coaches and/or parents) to increase compliance with the club policy. Such actions likely contributed to positive team climates, which may have in turn reduced potential dropout.

Despite the formation of a youth sport group designed to assure that the voices of the targeted athletes were heard, this group gradually dissolved, partly, because they had difficulty coordinating a meeting time to fulfill this assignment, and partly because their interest in trying to influence activities in the club waned when the board of the club failed to implement several proposals for changes made by the group. One of the main reasons mentioned for not implementing some of the proposed

activities (e.g., free entrance for youths when the representative teams are playing, starting a youth tournament), was because the board did not have time or financial resources to implement the proposed measures. However, the group members also experienced a lack of interest on the part of the club to implement most of their suggestions to change or start new activities. Hence, we suggest that sport clubs, in which similar interventions will take place, allocate funds to the youth sport group so they have more opportunities to implement proposed activities. Moreover, there may be value in limiting the number of sessions for any youth sport group (e.g., once every two-months versus once a month) to increase attendance and ensure the meeting does not become too time-consuming. A contributing reason for the group's dissolution may also have been that the stated purpose of the group was not clearly communicated to the members. This may have led to the perception among group members that their mission was not particularly meaningful. Consequently, we believe that the purpose of a group's work should be clarified and discussed jointly with the athletes involved. We believe that a youth sport group comprised of athletes from various teams is an important component of an intervention program designed to mitigate dropout, as it enables youth to influence the activities of which they are part of and helps satisfy their need for autonomy (Deci & Ryan, 2000).

Based on our experience gained from this project, it may be advisable for practitioners to use a multi-level approach and validated motivational theories in guiding the development, planning and implementation of interventions and incorporating athlete and coach perspectives into the process.

Note

1. A more detailed description of these models/theories and how they were employed to reduce female athletes' dropout rates is described in the next section. The description helps illustrate the implementation of the program.

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