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The effects of a sport education season on empathy and assertiveness

L.M. García-López* and D. Gutiérrez

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Background: One of the objectives of the new Spanish Education Act is for students to develop a series of social skills, largely derived from the ability variables of assertiveness and empathy. Sport Education is an instructional model that is deemed useful in the development of personal and social responsibility and social values. It requires interaction among students during group activities as there are many roles and responsibilities involved. Previous research on Sport Education reveals links between certain results and empathy and assertiveness, although no specific studies have been conducted.

Purpose: The aim of this research study is to analyse the effect of a Sport Education season on student empathy and assertiveness.

Participants and setting: Sport Education was implemented in seven intact groups at five different schools in central Spain. 154 subjects (76 boys and 78 girls) participated in this study, 34 of whom were in primary education year 5 (11 years), 98 in primary education year 6 (12 years) and 22 in secondary education year 2 (14 years).

Research design: A single treatment pre-post-test design was applied, in which the tests for measuring the dependent variables (empathy and assertiveness) influenced by the independent variable (the Sport Education season) were applied before, during and at the end of the programme.

Data collection: The Empathy Questionnaire and the Children’s Assertiveness Behaviour Scale were used to measure dependent variables.

Data analysis: For group/team data, analysis of variance was conducted to determine the influence of Sport Education on empathy and assertiveness. For individual students, repeated measures analysis of variance were utilised to measure the influence of factors, such as gender and role at the various points at which the programme was applied (pre-test and post-test).

Findings: Positive results were obtained in assertiveness, where differences were significant between pre-test and post-test, although the effect size differed from case to case. Group and team were key aspects when differences were significant.

Conclusions and implications: Sport Education was shown to be a useful instructional model for improving a variable (assertiveness) directly related to personal and social responsibility. Nevertheless, in order to achieve these results, teachers need to design and apply pedagogical strategies routinely, and pay very close attention to the dynamics created in the classroom. Further research involving more specific testing of classroom situations in general and Physical Education situations in particular is also required.

Keywords: Physical Education; sport education; empathy; assertiveness; social relations

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Introduction

The introduction of the Education Act in 2006 marked the beginning of a new phase in education in Spain, in which the concept of competency came to the fore. The preceding Education Act centred on the concept of ability, which was understood as the series of aptitudes and resources used by individuals to perform a specific task. In contrast, competency presents a more practical and applied focus. According to Rychen and Salganik (2006), competency is defined as the ability to respond successfully to complex demands in a specific context by drawing on cognitive and practical knowledge and attitudes, as well as social and behavioural components, such as attitudes, emotions, values and motivations. Competency exceeds the concept of ability by placing a greater emphasis on the mobilisation of knowledge (i.e. its implementation) and attaching greater importance to the socio-affective aspect of a particular subject in relation to how efficient he or she is when performing tasks.

One of these competencies is known as social and citizen competency, the acquisition of which involves the development of a series of social skills, such as ‘expressing one’s own ideas and listening to the ideas of others’, ‘resolving conflicts peacefully’ and ‘the ability to put oneself in someone else’s position and understand their point of view, even if it is different to one’s own’ (Ministerio de Educación y Ciencia 2006, 43061). These two social skills largely derive from the ability variables of assertiveness and empathy. Empathy and assertiveness have been studied previously in Physical Education, mainly in relation to the inclusion of children with disabilities (Moffett, Alexander, and Dummer 2006; Panagiotou et al. 2008) and to educational programmes (Goudas and Magotsiou 2009; Holt et al. 2012). In this research study, we have set out to analyse the extent to which the Sport Education instructional model can help participants develop these two abilities with a view to enhancing their social and citizen competency.

Siedentop (1994) proposed the development of a competent, literate and enthusiastic sportsperson as the main goals of Sport Education. Literacy encompasses the ethical dimension of the model. It is, therefore, the goal most closely related to the research variables of the present study: empathy and assertiveness. A literate person is defined as someone who ‘understands and values the rules, rituals, and traditions of sports and activities and can distinguish between good and bad practices in those activities’ (Siedentop, Hastie, and Van Der Mars 2011, 8). According to Harvey, Kirk, and O’Donovan (2011), the pioneers in the application of the Sport Education model believed that this goal could be achieved automatically. Nevertheless, research on this issue has shown that these benefits cannot be achieved implicitly, and that there must be an explicit and intentional design and a desire to develop them (Harvey, Kirk, and O’Donovan 2011).

In terms of empathy, Sport Education would appear to foster the integration of students who are usually discriminated against (Hastie 1998b; MacPhail, Kirk, and Kinchin 2004; McCaughtry et al. 2004). Meanwhile, assertiveness may be linked to previous research results. Following Sport Education seasons, winning becomes just one of many aspects of sport for some students (Carlson and Hastie 1997; McCaughtry et al. 2004). This can be attributed to the fact that students learn to value sport for what it is. Other students are aware of the responsibility of being leaders and working as part of a team (Carlson and Hastie 1997; Hastie 1997; MacPhail, Kirk, and Kinchin 2004; McCaughtry et al. 2004; Hastie and Sinelnikov 2006). This factor is linked to the increased assertiveness of the students, as they see the need to become leaders in certain teamwork situations as normal and do not adopt a passive (PA) approach or abuse their position, which could be interpreted as aggressive (AG) behaviour.
The literature reveals the potential of the Sport Education model for developing literate sportspersons (Harvey, Kirk, and O’Donovan 2011), and with it empathy and assertiveness. Nevertheless, three extensive reviews of research on Sport Education (Wallhead and O’Sullivan 2005; Harvey, Kirk, and O’Donovan 2011; Hastie, Martínez de Ojeda, and Calderón Luquin 2011) report contradictory findings in terms of personal and social development. Results relating to inclusiveness and equity, based on gender and skill level and the power relationship between roles, are especially controversial. Positive results on inclusiveness were found in some studies, such as that conducted by MacPhail, Kirk, and Kinchin (2004). Here, some students recognised Sport Education as a means of getting to know classmates other than their friends, while some of the more talented students became more patient with less gifted classmates and cooperated with them (MacPhail, Kirk, and Kinchin 2004). O’Donovan (2003) also noted that the model had the ability to influence adolescent group culture by altering hierarchical relations and the motivations underlying them. Furthermore, from the viewpoint of both teachers (Pill 2008) and students (Kinchin et al. 2004), Sport Education promotes inclusion, particularly among less motivated students. In contrast, several studies have reported negative results in terms of gender-related equity (Hastie 1998b, 1998c; O’Donovan 2003; Kinchin et al. 2004), student status (Brock, Rovegno, and Oliver 2009) and the problematic use of power roles (e.g. captain or coach) in the promotion of equity and inclusiveness. Most of the negative results were reported to have occurred during competitive stages of the season. Brock, Rovegno, and Oliver (2009) assessed the impact of student status on relationships between them in the groups created during the course of Sport Education teaching seasons. This study revealed that student status based on economic wealth, attractiveness, athletic involvement and personality was employed as a means of dominating social interactions during group work. This domination influenced the acknowledgement of opinions and playing time during competition (boys and highly skilled team members had more playing time than girls and less-skilled team members). While (Penney, Clarke, and Kinchin 2005) suggested that the Sport Education model has great potential for inclusion, they also warned that this potential cannot be realised without skilled, knowledgeable and caring teachers. Moreover, teachers need to teach these desirable social and ethical behaviours, as Harvey, Kirk, and O’Donovan (2011, 1) contends that ‘rather than simply being caught, ethical conduct must be taught’.

The rationale for this study is supported in the current literature. A review of the latest research on Sport Education (Hastie, Martínez de Ojeda, and Calderón Luquin 2011) does not reveal a single study that investigates a construct of empathy. This study examines previously unresearched areas within the Sport Education social phenomenon (empathy and assertiveness). The present study responds to the call for sophisticated research designs that include a linear model and larger data sets (Wallhead and O’Sullivan 2005; Hastie, Martínez de Ojeda, and Calderón Luquin 2011). The aim of this study is to analyse the changes occurring in empathy and assertiveness resulting from the implementation of a Sport Education teaching season.

**Method**

**Participants**

A total of 173 participants from five schools in the provinces of Albacete and Ciudad Real in central Spain took part in the study. As a result of attrition, the final sample comprised 154 participants (76 boys and 78 girls), 34 of which were in primary year 5 (11 years),
98 in primary year 6 (12 years) and 22 in secondary year 2 (14 years). The children attending the schools came from middle-class backgrounds, and the ability to access these schools was a determining factor in the selection of the groups. All parents and guardians gave their prior written consent to their children or wards taking part in the programme. Permission was also obtained from every school principal, once the teachers’ had agreed to participate in the project. Six teachers (five males and one female) took part in the study. All of them gave their permission for researchers to observe them in class.

**Research design**

A single treatment pre-post-test design was applied. The influence of a Sport Education season (an independent variable) on empathy and assertiveness (dependent variables) was measured. Tests were, thus, applied before, during and at the end of the programme. Given the nature of the dependent variables, which may be markedly heterogeneous across the various class groups, it was decided that the study should not include a control group. It was considered a control group gave no warranty to control possible bias. On the other hand, this was a collaborative research between the University and schools, and from an ethical view we decided not to discriminate against any group of students, as the control group would not receive the possible benefits from documented participation in the Sport Education season.

**Procedures**

The study comprised four phases. First of all, the teaching unit for applying the programme at the schools was designed. In the second phase, implemented at the start of the second term of the school year, a pre-test assessment was carried out. Phase three involved the implementation of the intervention programme, consisting of 18 Physical Education sessions (twice per week) and which took up a large part of the second term. In the fourth and final phase participants were once again presented with evaluation tests, this time in the final week of the second term. Primary year six and secondary year two students were also tested midway through the unit, with tests being presented once per day. Tests were held in Physical Education classes and in other classes, and on different days to prevent participants from suffering fatigue due to their length.

**Design and validation of the intervention programme**

During the first term, the researchers developed a handball-teaching programme with the structure of a Sport Education model (Siedentop, Hastie, and Van Der Mars 2011). All the teachers charged with the task of implementing the programme had approximately 12 years of teaching experience. All of them took part in a training course on the model, where theoretical aspects were taught and the model was implemented. Following the course, they implemented a Sport Education season prior to research. The teachers met on a weekly basis during the training process and the actual implementation of the model, the idea being to deal with any queries and to share solutions to the various problems that arose. These meetings were audio-recorded.

The intervention programme was implemented in one class at all the schools but one, where it was implemented in two classes. The season comprised 18 sessions on the same sport: handball. Prior to the implementation of the programme and with a view to comparing the results of the various groups at different schools at a later stage, the following aspects of the season were agreed on: five teams per class; the roles to be used during
the season (coach, fitness coach, member of the dispute resolution and festivity committee, scorekeeper and referee); in the event of any team having one player less, the fitness coach would assume the role of the committee member; the sixth member of teams with more than five players would act as the referee; the regular-season phase would comprise four matches and four training sessions; the teams would be co-educational, chosen by the students by means of a draft system, and teachers selected were socially accepted, and technically qualified students as coaches.

Lessons sequence
Pre-season lessons and training sessions during the regular-season phase involved initial warm-up and organisation routines led by students, followed by a game-task-game sequence based on the Tactical Games Approach lesson structure (Mitchell, Oslin, and Griffin 2003), where tasks were teacher-led in the first lessons, with leadership then being gradually passed on to coaches. During formal competition, two teams competed in official matches, while a duty team officiated and the other two teams completed assessment questionnaires (Game Performance Assessment Instrument) addressing the content covered in the previous training lesson.

Game/handball content
The first and second lessons were dedicated to establishing routines and rule appreciation. Subsequent lessons focused on different tactical problems and most of the related skills. Pre-season lessons (lessons 3–5) focused on attacking tactical problems (penetrating the defence and scoring) and related on-the-ball skills (passing, throwing to goal and moving with the ball). Training sessions during the regular-season (lessons 8, 10, 12 and 14) focused on getting free from opponents and defence.

Based on the results of García López et al. (2012), specific pedagogical applications were designed as a means of teaching empathy and assertiveness (dependent variables). Furthermore, awareness of the ethical goals that should be taught and not caught (Harvey, Kirk, and O’Donovan 2011) was raised among teachers. Although these pedagogical applications were designed prior to the publication of Harvey, Kirk, and O’Donovan (2011), they can be added to their proposal of a pedagogical application for ethical development: ethical contracts, based on the model published by Siedentop, Hastie, and Van Der Mars (2011), with each team signing a fair-play contract; sport panels, with a disciplinary committee being set up by a member of each team, the purpose of which was to discuss repeated breaches of the ethical contract and to take additional measures if necessary; games modification, as practice and games were conditioned; and awards based on a fair-play accountability system and other tasks explained herein. With regard to practice and conditioned games, the ‘official’ game form was adapted from the game designed for sixth graders by (Gutiérrez et al. 2011). Gutiérrez et al. (2011) designed games tailored to student abilities, with the result that technical requirements were not so high that they prevented less skilful students from participating. In addition, the number of players, rules, space, etc., was determined in order to provide an optimum level of challenge (Kretchmar 2005). In addition, a fair-play accountability system was included as a key factor in determining teams’ standings. At the end of matches, the referee and scorekeeper awarded points to teams meeting the following three conditions: respect for the game (rules and referee), respect for team-mates and opposing players, and the exchanging of handshakes with opponents at the end of the match. In every weekly meeting, teachers were
encouraged to interact with students during their discussions in order to help them to understand difficulties, views and experiences of their different roles.

Teachers were aware that secondary rules (Launder 2001) could be modified during the season and tailored to the process for the purpose of achieving the study goals. An example of this was the modification made in one group with a view to improving inclusion during an actual game. One of the teachers modified the scoring system to reward goals scored by students with low skill levels or who were less involved in the game. At the end of the regular-season additional points were awarded to the team, whose lowest scorer had scored the most goals, a rule named as ‘the top lowest scorer’. Additionally, teams had points subtracted from their scores at the end of the regular season, if they included one or more players who had not scored. This rule was also applied in the playoffs and finals, where several points were added when all participants had scored at least one goal. Teams developed strategies that invariably involved their most skilled player (usually the captain) scoring as fast as possible and then changing to a more cooperative style of play, with the most skilled player being in charge of distributing the ball. This change made each player’s actions more valuable and also improved the quality of game play. Awards were given to the ‘most improved player’, the ‘best cheerleader’ and the ‘best sportsperson’. Students voted for two players in each category: one player from the rest of the teams and one from their own team. Special attention was also paid to roles. In preparation meetings, teachers were told to focus in particular on the importance of every role. A comprehensive schedule for monitoring each role was thus designed, though no data were collected on the aforementioned pedagogical application.

The Sport Education benchmark observational instrument (Ko, Wallhead, and Ward 2006; Sinelnikov 2009) was used to validate the model implemented, giving researchers the opportunity to confirm the existence or non-existence of Sport Education benchmarks in the lesson and season plans, and during actual teaching. All lessons were video-recorded to check benchmark elements during Sport Education teaching. Table 1 illustrates pedagogical behaviours planned and displayed during the Sport Education season. All teachers adopted the benchmark elements of the Sport Education model in all cases. This was ratified by the researchers, who analysed video-recordings and attended the teachers’ meetings.

**Measures**

As empathy and assertiveness variables are related to the psychological sphere, generic psychometric measures that are widely accepted in psychology (Spence and Donovan 1999; Garaigordobil 2009; Garaigordobil and Maganto 2011) were applied. Additionally, a non-specific test for Physical Education, which provides us with a broader range of information, can be applied to real life and offers up information on the transference of the programme to other environments beyond Physical Education, even if the information obtained is less specific to Physical Education classes.

_Empathy Questionnaire (EQ)_ (adapted from Mehrarian and Epstein 1972; Garaigordobil 2009). The EQ comprises 22 statements referring to empathic feelings that are used to measure the capacity for cognitive and emotional empathy. Respondents were asked to indicate whether they usually do, think or feel what the statement says, or not. For example, ‘Seeing someone else cry makes me feel like crying’, ‘When I see someone is ill, I feel sad’, and so on. Psychometric studies related to EQ are as follows: Cronbach’s alpha = .74, Spearman-Brown = .75 (reliability); helping behaviour is a function of empathic tendency ($\beta = .31$) (mediational analyses); aggression is negatively related to
Table 1. Sport education specific pedagogical behaviours during the season (Ko et al. 2006; Sinelnikov 2009).

<table>
<thead>
<tr>
<th>The benchmark element</th>
<th>Teacher 1</th>
<th>Teacher 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher plans the unit around the principle of a season</td>
<td>Management/organisational phase</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Team selection phase</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Pre-season scrimmage phase</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Regular-season phase</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>End-of-season event</td>
<td>Planned Actual</td>
</tr>
<tr>
<td>The teacher promotes the affiliation concept.</td>
<td>Students involved in the process of team selection</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Teams persisting for duration of unit</td>
<td>Planned Actual</td>
</tr>
<tr>
<td>Teacher encourages students to take responsibility</td>
<td>Incorporates student duty roles within lessons</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Establishes contact and/or accountability for student performance in roles</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Teacher holds students accountable</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Teacher provides training for referees</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Teacher utilises tasks to train students in effective verbal communication and feedback</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Teacher provides task sheets for coaches/captains</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Teacher acts as a facilitator during interactions with student groups</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Teacher encourages students to resolve conflict within groups</td>
<td>Planned Actual</td>
</tr>
<tr>
<td>Teacher uses <em>formal competition</em> within unit plan</td>
<td>A formal schedule of competition is established</td>
<td>Planned Actual</td>
</tr>
<tr>
<td>Teacher utilises a form of <em>record keeping</em> within the unit</td>
<td>Fair-play and sportsmanship awards utilised</td>
<td>Planned Actual</td>
</tr>
<tr>
<td>Teacher uses <em>culminating event</em> near the end of the season</td>
<td>Teacher provides rubrics for scorekeeper</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Incorporates peer assessment as part of record-keeping process</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Culminating event is festive in nature</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Teams are easily identifiable (team names, team colours and team t-shirts)</td>
<td>Planned Actual</td>
</tr>
<tr>
<td>Teacher creates <em>festivity</em> within unit</td>
<td>Regular postings of team/individual performances</td>
<td>Planned Actual</td>
</tr>
<tr>
<td></td>
<td>Teacher emphasises the celebration of fair play</td>
<td>Planned Actual</td>
</tr>
</tbody>
</table>
empathy ($\beta = -0.21$); positive relationships with empathy of Eysenck’s IVE-J ($r = 0.65$) (validity). Empathic responses are graded as ‘1’, while non-empathic responses are graded as ‘0’.

Children’s Assertiveness Behaviour Scale (CABS) (Michelson and Wood 1982). The CABS assesses the social behaviour of children, exploring PA, AS or AG responses by children in a range of situations in which they interact with others. These situations relate to their social skills in giving and receiving compliments, maintaining and ending conversations, requesting favours, responding to an insult, expressing positive and negative feelings and so on. The scale includes 27 items, with 5 response categories per item, varying along a continuum of PA–AS–AG responses. Children choose the response that reflects the way they habitually react to a specific situation. AS responses are defined as those in which participants deal with the situation by expressing what they think and feel without hurting others, behaviours that involve the expressing of their feelings, upholding their rights, reasoning with others and so on. Where PA responses are given, the situation is not dealt with directly. These types of responses include inhibition (no action at all) and avoidance (fleeing from or avoiding the situation instead of dealing with it). AG responses are negative interaction behaviours, such as threats and physical and verbal aggression. Responses are graded as follows: $-2$ for very PA, $-1$ for partially PA, 0 for AS, 1 for partially AG and 2 for very AG. The total score (assertiveness) is the sum of all the answers. The PA score is the result of adding up the gross negative scores, and the AG score is the result of adding up the gross positive scores. Psychometric studies related to CABS are (Garaigordobil 2009): KR20 = 0.78; test-retest reliability = 0.86; factor analysis reveals a homogeneous structural factor; the instrument permits children with social skills training to be distinguished from those without (discriminant validity); Cronbach’s alpha for AS, AG and PA behaviours, AS = 0.73, AG = 0.77 and PA = 0.66; test-retest reliability in primary school (0.83; 0.83; 0.82), and in secondary school (0.73; 0.74; 0.76). Responses are graded as follows: $-2$ for PA responses, 0 for AS responses and $+2$ for AG responses.

**Data analysis**

Means and standard deviations of all measures were calculated. There are different units of analysis in the study. In the first case, we use group and team as units of analysis, because of the heterogeneity in these factors. Second, we have used individual students as the unit of analysis in order to observe the influences of factors, such as gender and role. To ascertain the effect of the programme on teams and groups 25 (team) $\times$ 7 (group) repeated measures analysis of variance was performed for each variable. The differences between the results obtained on individuals in the pre-tests and the post-tests were analysed by applying the Student $t$ test for related samples. To ascertain the influence of gender and role factors a 2 (sex) $\times$ 5 (role) repeated measures analysis of variance was performed for each variable. When results were significant, the effect size was calculated. The development of empathy and assertiveness in some of the participants (57 boys and 58 girls from primary education year six and secondary education year two) was analysed before the programme, halfway through the programme (before the competition phase) and after the programme by means of a repeated measures analysis of variance. For the purposes of avoiding a type-I error (acceptance of a false hypothesis), the Bonferroni adjustment was used to adjust the level of probability of significance to account for the number of tests conducted ($p < 0.01$). Data analysis was performed using IBM SPSS 19.0.
Results

Effects of the programme in accordance with team and group in the variables studied

There were no significant differences in empathy in accordance to team and group, though they did influence both with team \((F (34.116) = 2.646, p < .001, \eta^2_p = .437)\) and group \((F (4.91) = 5.027, p < .01, \eta^2_p = .189)\). The group effect size was particularly small, accounting for only 18.9% of the variance. In the case of team, however, it was moderate, accounting for 43.7% of the variance. It is evident that the context, which in this case is mainly configured by team at a micro level, influenced responses to the problematic situations that arose. If we assess assertiveness in more detail by analysing PA and AG behaviours, the results of the CABS do not reveal any differences in terms of either gender or role, though they do resurface in aggressiveness, both in the team variable \((F (34.119) = 2.736, p < .001, \eta^2_p = .437)\) and the group variable \((F (4.92) = 2.736, p < .001, \eta^2_p = .267)\). Out of all of them the only noteworthy effect size is that of the team factor on aggressiveness, accounting for 43.7% of the variance.

Passiveness decreased in all groups except group seven. The reason for this variability at group level is a high level of aggressiveness, albeit in varying degrees. The greatest problems in terms of behaviour were found in group one, as revealed by the group’s teacher in the weekly meeting with the researcher. It was also in this group that the passiveness variable decreased most between the pre-test \((M = -15.65, SD = 7.55)\) and the post-test \((M = -10.15, SD = 5.07)\), and in which the aggressiveness variable increased the most, almost doubling from \(M = 6.35 (SD = 6.04)\) in the pre-test to \(M = 11.88 (SD = 9.18)\) in the post-test. Group 7 maintained a high level of passiveness, in excess of an average of 11 points in both cases. Similarly, this group had the lowest initial level of aggressiveness \((M = 2.68, SD = 2.12)\). This figure, however, doubled in the post-test\((M = 4.91, SD = 6.02)\), although its level was still very low in comparison with the other groups. In view of the high typical deviations of these two groups, it can be deduced that the former comprised many troublesome students, and the second, many submissive students.

Effects of the programme on empathy. Influence of gender and role

The data generated by the EQ were analysed with a view to observing changes in empathy brought about by the intervention programme. As given in Table 2, there was

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Student t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Empathy</td>
<td>16.17</td>
<td>3.05</td>
<td>16.87</td>
</tr>
<tr>
<td>CABS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passiveness</td>
<td>-13.98</td>
<td>5.66</td>
<td>-11.25</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>-14.18</td>
<td>5.77</td>
<td>-5.71</td>
</tr>
<tr>
<td>Aggressiveness</td>
<td>3.51</td>
<td>3.88</td>
<td>5.54</td>
</tr>
</tbody>
</table>

*p < .05.

**p < .01.

***p < .001.
an increase in empathy from the pre-test to the post-test, with the average increasing from 16.17 (SD = 3.05) to 16.87 (SD = 3.23) and no significant differences in the Student t test ($p > .01$) being obtained. There were no significant differences in empathy in accordance either gender (Table 3) or role (Table 4), though they did influence both.

### Effects of the programme on PA, AS and AG behaviours. Influence of gender and role

The variable where the greatest improvement was noted was assertiveness, the average value of which rose from $-14.18$ (SD = 5.77) to $-5.71$ (SD = 8.89). The differences detected in this variable by the Student $t$ test were significant ($p < .001$) and the effect size was large ($d = .95$), mainly due to the considerable reduction in PA behaviours. AG behaviours increased, however, albeit to a lesser extent. The differences in both passiveness and aggressiveness were statistically significant ($p < .001$ in both cases). The effect size of the differences was moderate in terms of passiveness ($d = .52$) and small in terms of aggressiveness ($d = .31$).

Although the programme did not result in the participants reducing their AG behaviour, it did stop them displaying a PA attitude to what was happening around them and encouraged them to become involved in the team- and class-work dynamics. There were no significant differences in assertiveness in accordance with gender and role.
Development of the effects of the programme in the phase leading up to the start of the competition period

A repeated measures analysis of variance was applied in order to analyse the effects of the programme in each phase: prior to the programme, prior to the competition period and at the end of the programme. Means and standard deviations are given in Table 5. In the empathy variable, there were no significant differences between the first test and the intermediate test. However, differences did arise between the pre-competition phase and the final phase \( (p < .01) \), the size effect of this difference being small \( (\eta^2_p = .063) \).

As regards assertiveness, the significant differences \( (p < .001; \eta^2_p = .442) \) revealed by the repeated measures analysis of variance appeared between the first and the second test, with a slight improvement then being recorded. Passiveness decreased significantly between the first and second test \( (p < .001; \eta^2_p = .317) \) and then increased in the third test \( (M = -11.10, SD = 5.36) \) \( (p < .001; \eta^2_p = .071) \). Although the level in this last test was below that of the first, results thereafter were positive. The aggressiveness variable increased in the two time periods, but significant differences were only found between the first and the third test \( (p < .001) \), with a small effect size \( (\eta^2_p = .194) \). The pre-competition phase yielded far fewer problematic situations than the competition period, resulting in a more favourable climate and a greater willingness to collaborate among team-mates and opponents.

Discussion

The objective of this study was to evaluate the extent to which the Sport Education instructional model can aid the development of social and citizen competency, a basic competency in curricula at all compulsory levels of education in Spain. In doing so, we assessed whether the model resulted in improvements in empathy and assertiveness, with positive results noted in some aspects.

Previous studies identified changes in students’ behaviours that are related to empathy in different ways (Carlson and Hastie 1997; Hastie 1997, 1998a, 1998b; MacPhail, Kirk, and Kinchin 2004; Hastie and Sinelnikov 2006). This research, which has a more specific focus on empathy, showed no significant differences in this variable. In a previous study taking a similar approach (García López et al. 2010), but with a smaller number of participants \( (n = 21) \), no significant differences were detected in terms of improvements in empathy. The authors of that study recommend that whenever conflicts arise, teachers should encourage students to put themselves in the position of their classmates. This point was repeatedly made to teachers in meetings and was put into practice. However, it is not possible to know as to what extent it was done. On the other hand, it may be difficult
for students to understand other team member’s roles, if they have not yet experienced them. Providing more Sport Education seasons would allow students to take different roles and potentially develop more understanding. This idea is consistent with the results obtained by Sinelnikov and Hastie (2010), who gathered the recollections of a cohort of students (15 boys and 19 girls) who had participated in 3 seasons of Sport Education from grades 6 to 8. Sinelnikov and Hastie (2010) stated that ‘students claimed they had a deeper understanding of these sports as a result of their participation, and in particular, as a result of their officiating roles’ (167). Future research could analyse the effect on empathy of several consecutive Sport Education Seasons in which all students adopt all the different roles. Another study yielding similar results was conducted by Pill (2010), who explored students’ reflections on a Sport Education season. Data from his analysis showed that Sport Education has a positive effect on the class climate and on the development of the personal and social skills of students in a primary school setting. Empathy behaviours should probably be assessed by measures specific to Physical Education and Sport Education as a step prior to measuring general empathy. It may also be true, however, that longer interventions yield more positive results.

With regard to factors influencing empathy, differences were only noted in the group factor, and not in the gender, role or team factors. In the one group that stood out from the others there were serious shortcomings in terms of behaviour, as the teacher leading the group commented in meetings as could also be seen in videos. The issue, as we see it is that, on many occasions, in taking a class, teachers may have a non-directive position. Should the situation require, however, they must be able to take a firm and consistent approach to disruptive behaviour of any kind, while continuing to adopt other less directive teaching styles. As far as possible, and for the purposes of ensuring coherence with the model, more directive teaching methods should be proposed (at an earlier or later stage) by the dispute resolution committee. This would allow students to play a part in drawing up and enforcing regulations.

The programme improved AS behaviours, mainly due to a major reduction in PA behaviours. This backs up the findings of Carlson and Hastie (1997), Hastie (1997), Hastie and Sinelnikov (2006), García López et al. (2010), MacPhail, Kirk, and Kinchin (2004), and McCaughtry et al. (2004), who describe how some students are encouraged to act as leaders and work for the team, which corresponds with a reduction in passiveness among participants. Nevertheless, while there were improvements in both passiveness and assertiveness, AG behaviours increased, which demonstrates how difficult it is for team members to get along over an extended period of time and in situations, such as competition. With the aim of reducing AG behaviours, it is perhaps, necessary to employ aspects developed in other programmes, which have that objective in mind, such as the programme conducted by Vidoni and Ward (2009), who examined the effects of fair-play instruction on middle-school Physical Education classes during a tag rugby season. They found a decrease in the number of harmful behaviours.

Role did not influence variables relating to assertiveness, with improvements being obtained in all of them. The study carried out by García López et al. (2010) found that aggressiveness increased in participants, who performed the roles of coach and technical director, whereas it decreased in the roles of fitness coach, dispute resolution committee member and referee, and remained stable in the role of scorekeeper. This may be due to the higher level of responsibility involved in these roles. For that reason, in the meetings held as part of our study it was repeatedly stressed that teachers should pay special attention to situations, where conflict arises for coaches and referees, and should seek to resolve them in a positive manner.
Team was a factor influencing assertiveness, which emphasises the fact that context is a key determining issue in improving this type of social skill. This was reflected at both a micro and macro level in the team and class group, respectively. The group demonstrating the highest level of indiscipline obtained the highest rating in the aggressiveness variable, and barely improved it. The most PA group improved in this variable, but not in aggressiveness. The team factor influenced the assertiveness and aggressiveness variables. Although a quantitative approach was taken in analysing data, we must bear in mind that in terms of situated perspectives on learning, the unit of analysis includes the individual, the activity in which he or she is engaged, and the context or setting, these elements being inseparable (Lave 1988). As a result, and especially when the model greatly encourages social contact between students, it is only logical that group and team should, to a large extent, determine results. Future research should consider using the team as the unit of analysis due to its relevance on results.

A new facet in this study is the analysis of results at the midway point of the season, prior to the start of the competition period. In the empathy variable, significant differences appear before and after the competition period, although the effect size was small. With regard to assertiveness, significant differences appear between the first and the second test (before and after the pre-season). Passiveness decreases significantly between the first and the second test, and the aggressiveness variable increases in the two time periods, although the difference is only significant between the first and third test. This could lead to the conclusion that the competition period should be eliminated. We believe, however, that such action is not appropriate as it would make it impossible to transfer the model to real life in line with the concept of ‘legitimate peripheral participation’ (Lave and Wenger 1991; Kirk and Kinchin 2003). This is because competition, whether of a sporting nature or otherwise, plays an important role in children’s lives. The fact that the competition period should not be removed does not mean that it cannot be ‘softened’ in certain contexts, such as indiscipline or in the first phases of the application of the model. Pedagogical applications used in previous studies, such as fair-play accountability (Hastie and Sharpe 1999) or fair-play instruction (Vidoni and Ward 2009), have been shown to lessen the negative effects of competition. These pedagogical applications were included in the design of the present study. Nevertheless, they do not guarantee the non-appearance of negative results associated with competition, such as the increase in aggressiveness detected in this study during the competitive period. According to Harvey, Kirk, and O’Donovan (2011), Grant (1992) and Grant, Tredinnick, and Hodge (1992) were the first to attempt to reach ethical goals (inclusion) through Sport Education. Since then several other studies have attempted to achieve ethical development through Sport Education. After two decades of research, there is still a need for further studies to be conducted to determine which pedagogical applications or extensions of the model are capable of harnessing the potential of the model and developing sport literacy. For example, it would be worthwhile researching whether competitions in which there is no ranking system would generate less motivation or lower victory objectives, allowing students to enjoy the game more or be more aware of the social demands of the class. Whatever may be the case, assertiveness values continued to improve during the competition period, albeit to a far lesser extent.

The most important conclusion that we can draw from this study is that Sport Education has great potential in terms of educating children, although the effects of these types of teaching models must be checked empirically. In this particular case, the programme appears to have enhanced the ability of children to understand situations from a generic viewpoint, which can be deduced from the fact that improvements were noted in the
empathy and assertiveness variables. It can be concluded, therefore, that when taught in appropriate teaching conditions Sport Education is a good tool for enhancing social and citizen competency, as stipulated in the Spanish curriculum. However, the tests applied did not encompass the real situations arising during the programme, which may be a future line of research, in which empathy and assertiveness questionnaires can be adapted beforehand to situations arising in a Physical Education class. The programme, however, comprises only 18 hours of intervention, which presents another possible area of development in the continuation of this line of research. In addition, the gradual and appropriate introduction into the group of students of the competition period could represent another important line of analysis into the Sport Education model.

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