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## **Educational and psychosocial development of adolescents in Specialist Sport Programs in Low SES Areas of Perth, Western Australia**

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**Educational and psychosocial development of  
adolescents in Specialist Sport Programs in Low  
SES Areas of Perth, Western Australia**

This thesis is presented for the degree of  
**Doctor of Philosophy (Psychology)**

**Eibhlish Máire Bridget O'Hara**

**Edith Cowan University**  
School of Arts and Humanities  
Perth, Western Australia

**2020**

## Declaration

I certify that this thesis does not, to the best of my knowledge and belief:

- i. Incorporate without acknowledgement any material previously submitted for a degree or diploma in any institution of higher education;
- ii. Contain any material previously published or written by another person except where due reference is made in the text; or
- iii. Contain any defamatory material.

 29.06.2020

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(Signature and date)

## **Abstract**

Adolescents from low socio-economic (SES) backgrounds are more vulnerable, experience more physical and mental health problems, and often do not have as many positive educational outcomes as adolescents from higher SES backgrounds (Totten, 2007). Most research examining youth recreational activities, such as sport programs, demonstrate the positive influence they can have, especially for adolescents living in low SES neighbourhoods (National Research Council and Institute of Medicine, 2002). However, adolescents living in low SES neighbourhoods often have limited access to such programs (Leventhal, Dupéré, Brooks-Gunn, 2009). As such, it is important to find alternate ways for adolescents living in low SES areas to participate in recreational activities.

Schools are one of the most influential institutional resources with regards to adolescent development and well-being (Blum, Astone, Decker, & Mouli, 2014). Poulou and Norwich (2019) stated that it is “imperative to identify the protective factors that teachers could manipulate within a school context” so that the needs of at-risk adolescents are met (p. 1). Specialist Sport Programs (SSPs) are an underexamined activity that combines the best features of two different contexts for adolescent development: a sporting program and a secondary school. It is thought that SSPs could be one such modification to conventional education that teachers could use to facilitate adolescent adjustment and even prevent the exacerbation of their problems (Poulou & Norwich, 2019).

The overarching purpose of this research was to investigate the educational and psychosocial development of adolescents involved in SSPs located in low SES areas of Perth, Western Australia (W.A.). To do so, four studies were conducted.

Study 1 collated and evaluated the existing literature on SSP participation. The studies included in the systematic review demonstrate that SSPs have the potential to positively, and



at times negatively, influence adolescent outcomes. Study 2 then explored the perceptions of key stakeholders regarding the impact of participation in an SSP located in a low SES area of Perth, W.A. Analysis of the interviews conducted with specialist students and their parents, as well as with teachers and graduates of the program, revealed the positive influence of SSPs as well as the elements of the SSP that were thought to be influential for facilitating school engagement, developing life skills, and promoting positive relationships.

To strengthen the knowledge base regarding the influence of SSPs for adolescents living in low SES areas of W.A., two quantitative studies were also conducted. Study 3 examined specialist students' psychosocial development while Study 4 examined the specialist students' educational outcomes. Study 3 found a significant decline in specialist students' physical self-perceptions over time. However, the specialist students' life satisfaction, basic psychological needs satisfaction, social competence, and resilience all remained stable over the period of a year. Study 4 found a significant improvement in specialist students' mean grade for Mathematics over time; however, their mean grade for all other subjects and their level of engagement with school remained stable over the period of a year.

Taken together, the results of this research suggest a role for SSPs in promoting positive developmental outcomes for adolescents attending schools located in low SES areas.

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### **List of Manuscripts for Publication**

- Study 1:** The Influence of Specialist Sport Programs (SSPs) on Adolescent Development: A Systematic Literature Review
- Study 2:** Influence of Specialist Sport Programs (SSPs) in Low SES areas of Western Australia: A Qualitative Exploration
- Study 3:** Psychosocial Development of Adolescents Participating in Specialist Sport Programs (SSPs) in Low SES Areas of Western Australia
- Study 4:** Educational Outcomes of Adolescents Participating in Specialist Sport Programs (SSPs) in Low SES Areas of Western Australia

## Table of Contents

<b>Declaration.....</b>	<b>ii</b>
<b>Abstract.....</b>	<b>iii</b>
<b>Acknowledgements .....</b>	<b>v</b>
<b>List of Manuscripts for Publication .....</b>	<b>vi</b>
<b>Table of Contents .....</b>	<b>vii</b>
<b>List of Tables .....</b>	<b>x</b>
<b>List of Figures.....</b>	<b>x</b>
<b>List of Appendices.....</b>	<b>xi</b>
<b>List of Abbreviations .....</b>	<b>xii</b>
<b>SECTION 1.....</b>	<b>1</b>
<b>Educational and Psychosocial Development of Adolescents in Specialist Sport Programs in Low SES Areas.....</b>	<b>2</b>
Adolescent Development .....	4
<i>Engagement with learning.....</i>	5
<i>A positive sense of self.....</i>	8
<i>Acquisition of life skills.....</i>	9
<i>Contextual influences on adolescent development.....</i>	11
Specialist Sport Programs (SSPs) in Schools.....	18
The Current Thesis .....	21
<i>Aim.....</i>	23
<i>Research design.....</i>	24
<b>SECTION 2.....</b>	<b>29</b>
<b>Preface to Study 1 .....</b>	<b>30</b>
<b>Study 1.....</b>	<b>31</b>
<b>Influence of Specialist Sport Programs (SSPs) on Adolescent Development: A Systematic Literature Review .....</b>	<b>31</b>
Current Review.....	34
<b>Methods.....</b>	<b>34</b>
Inclusion/Exclusion Criteria.....	34
Search Strategy .....	35
Study Selection.....	36
Data Collection and Analysis .....	36
Quality Assessment .....	37
<b>Results .....</b>	<b>44</b>
General Overview of Included Studies .....	44
Educational Outcomes Associated with SSPs.....	47
Psychosocial Outcomes Associated with SSPs.....	48
<i>Conscientiousness, self-determination, and satisfaction.....</i>	48
<i>Characteristics of specialist students and feelings regarding “high-ability.” .....</i>	49
<i>Physical self-perceptions.....</i>	49
<i>Perceptions of the consequences of failure.....</i>	50

<i>The embodiment of hegemonic masculinity</i> .....	51
The Influential Elements of an SSP .....	51
<b>Discussion</b> .....	<b>53</b>
General Discussion of the Included Studies.....	53
Influence of SSP on Adolescents' Educational Outcomes.....	55
Influence of SSP on Adolescents' Psychosocial Outcomes.....	56
<i>The positive influence of SSPs</i> .....	57
<i>The negative influence of SSPs</i> .....	58
The Influential Elements of an SSP .....	58
Critical Reflection of the Research Designs Used by the Included Studies.....	59
Strengths, Limitations, and Recommendations.....	60
<b>Conclusion</b> .....	<b>62</b>
<b>Preface to Study 2</b> .....	<b>63</b>
<b>Study 2</b> .....	<b>64</b>
<b>Influence of Specialist Sport Programs (SSPs) in Low SES Areas of Western Australia: A Qualitative Exploration</b> .....	<b>64</b>
<b>Method</b> .....	<b>67</b>
Sampling.....	68
Participants .....	68
Materials and Procedure.....	69
Data Analysis .....	70
<b>Results and Discussion</b> .....	<b>71</b>
The Positive Influence of SSPs .....	72
<i>Facilitation of student-school engagement</i> .....	72
<i>The development of life skills</i> .....	75
Factors Underpinning the Positive Influence of the SSPs.....	76
<i>SSP teacher and students' intrinsic interest in sport</i> .....	77
<i>Personal qualities of the SSP teacher</i> .....	77
<i>Amount of time spent in the SSP</i> .....	78
<i>Code of conduct</i> .....	78
Positive Relationships Developed Through the SSPs .....	79
<b>Conclusion</b> .....	<b>80</b>
<b>Preface to Study 3</b> .....	<b>82</b>
<b>Study 3</b> .....	<b>83</b>
<b>Psychosocial Development of Adolescents Participating in Specialist Sport Programs (SSPs) in Low SES Areas of Western Australia</b> .....	<b>83</b>
<b>The Current Study</b> .....	<b>86</b>
<b>Method</b> .....	<b>87</b>
Participants .....	87
Measures.....	87
<i>Physical self-perceptions</i> .....	87
<i>Social competence</i> .....	88
<i>Resilience</i> .....	88
<i>Basic psychological needs satisfaction</i> .....	89
<i>Life satisfaction</i> .....	89
Procedure.....	89
Analysis .....	90

<b>Results .....</b>	<b>92</b>
<b>Discussion.....</b>	<b>96</b>
<b>Preface to Study 4 .....</b>	<b>100</b>
<b>Study 4.....</b>	<b>101</b>
<b>Educational Outcomes of Adolescents Participating in Specialist Sport Programs (SSPs) in Low SES Areas of Western Australia.....</b>	<b>101</b>
<b>Method .....</b>	<b>106</b>
Participants .....	106
Measures.....	107
Procedure.....	108
Analysis .....	109
<b>Results .....</b>	<b>109</b>
<b>Discussion.....</b>	<b>113</b>
<b>Conclusion .....</b>	<b>115</b>
<b>SECTION 3.....</b>	<b>118</b>
<b>General Discussion.....</b>	<b>119</b>
The Educational Outcomes of Specialist Students .....	121
The Psychosocial Development of Specialist Students.....	124
<i>Identity</i> .....	124
<i>Well-being</i> .....	125
<i>Life skills</i> .....	127
Implications and Recommendations .....	131
<b>Conclusion .....</b>	<b>134</b>
<b>APPENDICES.....</b>	<b>136</b>
<b>References.....</b>	<b>170</b>

## List of Tables

Table 1	<i>Research Design</i> .....	26
Table 2	<i>Studies Investigating the Developmental Outcomes of Adolescents Participating in SSPs</i> .....	39
Table 3	<i>The Number of Participants (and their Gender) from Each School</i> .....	70
Table 4	<i>Psychosocial Outcomes Examined</i> .....	91
Table 5	<i>Descriptive Statistics and t-test Results for the Specialist Students</i> .....	93
Table 6	<i>Descriptive Statistics and t-test Results for the Specialist Students (Academic Performance</i> .....	111
Table 7	<i>Descriptive Statistics and t-test Results for Specialist Students (Student School Engagement)</i> .....	112
Table 8	<i>Physical Self-Perception Data for Comparison Students</i> .....	162
Table 9	<i>Basic Psychological Needs Satisfaction Data for Comparison Students</i> .....	163
Table 10	<i>Life Satisfaction Data for Comparison Students</i> .....	164
Table 11	<i>Social Competence Data for Comparison Students</i> .....	165
Table 12	<i>Resilience Data for Comparison Students</i> .....	166
Table 13	<i>Academic Performance of Comparison Students</i> .....	167
Table 14	<i>School Engagement Data for Comparison Students</i> .....	169

## List of Figures

Figure 1	<i>Stages of Study Selection</i> .....	37
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## **List of Appendices**

Appendix A: Letter of Approval—ECU .....	137
Appendix B: Letter of Approval—Department of Education .....	138
Appendix C: Letter of Approval—Catholic Education Office .....	139
Appendix D: Information Letter and Consent Form—Principal .....	140
Appendix E: Information Letter and Consent Form—Teacher .....	142
Appendix F: Information Letter and Consent Form—Families .....	144
Appendix G: Information Letter and Consent Form—Graduates .....	146
Appendix H: Interview Schedule—Teacher .....	148
Appendix I: Interview Schedule—Parent.....	150
Appendix J: Interview Schedule—Student.....	152
Appendix K: Interview Schedule—Graduate .....	155
Appendix L: Sample Code of Conduct Implemented at One of the SSPs Involved in the Research .....	157
Appendix M: Psychosocial Data for Comparison Students .....	162
Appendix N: Educational Data for Comparison Students .....	167



## **List of Abbreviations**

ANOVA .....	Analysis of variance
BMSLSS .....	Brief Multidimensional Students' Life Satisfaction Scale
BPNS-GS .....	Basic Psychological Needs Satisfaction—General Scale
CASP.....	Critical Appraisal Skills Program
CYPSP .....	Child and Youth Physical Self-Perception Profile
HPE.....	Health and Physical Education
ICSEA.....	Index of Community Socio-Educational Advantage
IPA .....	Interpretative phenomenological analysis
READ.....	Resilience Scale for Adolescents
S&E.....	Society and Environment
SES.....	Socio-economic status
SSEM .....	Student-School Engagement Measure
SSP.....	Specialist Sport Program
TISS .....	Teenage Inventory of Social Skills

# SECTION 1

## **Educational and Psychosocial Development of Adolescents in Specialist Sport Programs in Low SES Areas**

The World Health Organization and United Nations define an adolescent as an individual between the ages of 10 and 19 years (United Nations Children's Fund [UNICEF], 2011). The period of adolescence is characterised by cognitive, psychosocial, and emotional changes in development as the individual transitions from childhood to adulthood (Archambault, Janosz, Morisot, & Pagani, 2009; Sanders, 2013). The changes observed in adolescence are influenced by environmental factors that can have either a positive or negative impact on development (UNICEF, 2005). One such factor that can influence adolescent development is socio-economic status (SES).

As an environmental influence, low SES can have a negative influence on adolescent development, including an association with negative educational outcomes such as: lower levels of school attendance, academic achievement that is below the national standard, and lower rates of secondary school completion (Australian Bureau of Statistics [ABS], 2011; Hancock, Shepard, Lawrence, & Zubrick, 2013; Lamb, Jackson, Walstab, & Huo, 2015). Low SES has also been associated with negative psychosocial outcomes such as: lower levels of life satisfaction, a higher risk of problematic behaviour, and one third of the cases of adolescent depression (Ash & Huebner, 2001; Goodman, Slap, & Huang, 2003; Menrath et al., 2012; Seligson, Huebner, & Valois, 2003).

In contrast, other environmental factors can have a positive impact on adolescent development; possibly even protecting the adolescent from the detrimental influence of factors such as low SES. Consequently, these protective factors can assist adolescents from low SES backgrounds to pass through this stage of development successfully (Vanderbilt-Adriance & Shaw, 2008).

It has been suggested that one such protective factor is the opportunity to belong to and meaningfully participate in prosocial school and sport activities (Waller, 2001). In addition to motor performance, previous systematic reviews of school-based sport and physical activity have shown a positive association between participation and children and adolescents' self-concept and academic achievement (Demetriou & Honer, 2012; Rasberry et al., 2011). Therefore, it is thought that healthy adolescent development can be promoted through participation in school sport (Sport for Development and Peace International Working Group, 2006).

A school-based sport program that has the potential to benefit adolescents growing up in low SES areas is the Specialist Sport Program (SSP). SSPs are implemented in different ways in various parts of the world. Essentially, SSPs are any school-based sporting program that “makes provision to allow athletes to specialise in sporting excellence whilst simultaneously continuing a more conventional academic approach to education” (Gross & Murphy, 1990, p. 6). In Western Australia (W.A.), SSPs are delivered through state-funded secondary schools. Usually, only students within a certain catchment area (local enrolment area) are permitted to enrol in a state secondary school. However, schools that offer SSPs often allow the enrolment of students from outside their catchment area in order for them to be part of the program. Through SSPs, students specialise in one sport for some or all of the duration of their secondary school education, while being fully integrated into regular classes with other students (Radtke & Coalter, 2007). In order to graduate from secondary school, specialist students must meet the same academic standards as other students (Radtke & Coalter, 2007). As there is no guarantee of a professional sporting career, SSPs are also a systematic way for schools to cater for the educational and developmental needs of a substantial number of elite student–athletes (Radtke & Coalter, 2007).

Research investigating SSPs is limited. As such, the overarching purpose of this thesis is to investigate the educational and psychosocial development of adolescents involved in SSPs located in low SES areas of Perth, W.A. This dissertation is divided into three sections. Section 1 examines the pertinent background literature regarding adolescent development, contextual influences on adolescent development, and SSPs. Furthermore, that section outlines the rationale, objectives, and research design of the current thesis. Section 2 presents the four studies conducted: the systematic literature review, the qualitative exploration of SSPs, and the quantitative investigations of the educational and psychosocial outcomes associated with participation in an SSP. Finally, Section 3 discusses the results of the four studies, both in relation to each other and in relation to previous research. Section 3 also highlights the implications of the findings, the limitations of the research, and directions for future research.

This dissertation will examine SSPs as a context for adolescent development. As such, this research constitutes a relatively new area that has emerged from the broader field of adolescent development. In order to situate the studies that follow, the remainder of this section (i.e., Section 1) of the thesis will address the existing literature regarding adolescent development in general, as well as addressing literature on the various contexts for adolescent development. Finally, a general discussion of SSPs is provided.

## **Adolescent Development**

Adolescence is a critical period of development that is characterised by change (Ozer, 2017; Sturdevant & Spear, 2002). It is a time during which most aspects of an individual transform from being child-like to adult-like in order for the individual to live independently (Gaete, 2015; Lerner & Spanier, 1980). Traditionally, researchers in the field of developmental psychology perceived adolescence as a time of risk due to the number of

changes that occur concurrently (Eccles et al., 1993). However, this perception began to change in the late twentieth century with the formation of the positive youth development (PYD) paradigm (Jones, Edwards, Bocarro, Bunds, & Smith, 2016).

Although adolescence is often considered to be a single stage of development, three consecutive phases have been identified within adolescence: early, middle, and late (Gaete, 2015; UNICEF, 2005). Early adolescence is considered to be from 10–14 years of age, middle adolescence from 14–16 years, and late adolescence from 17–19 years (UNICEF, 2005). Research suggests that there are four goals of adolescence, which, if achieved by the age of 15 years, set an individual up for a successful transition into adult life (Blum, Astone, Decker, & Mouli, 2014). These goals are: engagement with learning, emotional and physical safety, a positive sense of self, and the acquisition of life skills (Blum et al., 2014). Achievement of these goals has been associated with improved behavioural, educational, and social outcomes (Blum et al., 2014).

### **Engagement with learning.**

According to Blum, Astone, Decker, and Mouli (2014) an important goal of early adolescence is engagement with learning. Secondary schools are the main institution for providing adolescents with an education and therefore have a significant influence on adolescents' learning. Research examining student–school engagement demonstrates that three aspects of students' engagement (students' aspirations, productivity, and belonging) can be predictive of their grades in core subjects (Hazel, Vazirabadi, Albanes, & Gallagher, 2014). As well as being associated with greater academic achievement, greater school engagement has been associated with adolescents' psychological well-being (Park, Holloway, Arendtsz, Bempechat, & Li, 2012).

Although engagement with learning is associated with positive educational and psychological outcomes for adolescents, students' engagement with their education has been found to decrease from primary to secondary school (Bradford Brown & Larson, 2009). This decrease in engagement is thought to be due to the changes in school context. That is, during adolescence, individuals make the transition from primary to secondary school—a move that involves a considerable change in classroom structure. In primary school, students have one main teacher for all subjects throughout the academic year; in comparison, secondary school students have a different teacher for each subject (Poulou & Norwich, 2019). This specialised nature of instruction in secondary school creates more distant student–teacher relationships, and consequently has a negative impact on student engagement levels (Brown & Larson, 2009).

Research, however, has shown that most traditional school-based activities either induce a level of anxiety or boredom in students (Nakamura & Csikszentmihalyi, 2005; Shernoff & Csikszentmihalyi, 2009). A combination of low skill with high challenge results in anxiety; while a combination of high skill with low challenge results in boredom (Nakamura & Csikszentmihalyi, 2005; Shernoff & Csikszentmihalyi, 2009). In comparison, activities that balance the level of challenge with the individual's skill level facilitate flow (Mahoney, Lowe, Vandell, Simpkins, & Zarrett, 2009).

Flow represents the optimal balance between skill and challenge (Csikszentmihalyi, 1990), and is a sign that students are engaged with learning (Kristjansson, 2012). As this balance has been found to enhance learning, flow experiences are proposed to be effective in facilitating the developmental process (Mahoney, Lowe, Vandell, Simpkins, & Zarrett, 2009). Due to the significant positive influence of school engagement and the lack of engagement that results from traditional teaching methods (Shernoff & Csikszentmihalyi, 2009),

educators have been urged to find alternative ways for students to meaningfully engage with the curriculum (Chen & Ennis, 2009).

### ***Emotional and physical safety.***

Emotional and physical safety is another important goal of early adolescence (Blum, Astone, Decker, & Mouli, 2014). As adolescents spend a significant amount of time in secondary school, it is important to understand what emotional and physical safety means for them in relation to their school attendance. Emotional safety is when an individual feels safe to express their emotions, has the confidence to take risks, and is excited to try something new (American Institutes for Research, 2020). Physical safety is when an individual is protected from physical threats such as violence, theft, and exposure to weapons (American Institutes for Research, 2020). A common example of the lack of emotional and physical safety that many adolescents experience at school is bullying (American Institutes for Research, 2020).

Feeling emotionally and physically safe at school is important. Students who feel safe are more likely to experience positive outcomes such as higher academic performance, increased feelings of connection to school (engagement), and are less likely to drop out (American Institutes for Research, 2020). In comparison, those who feel unsafe at school are at-risk for poor attendance, lower grades, and course drop-out (American Institutes for Research, 2020). Research has consistently shown that for adolescents to fully engage with their education, and consequently thrive, they need to feel safe at school (American Institutes for Research, 2020).

Integrating social and emotional learning into adolescents' education is thought to be essential for developing a safe learning environment (American Institutes for Research, 2020). Through social and emotional learning, students develop the skills they need to



manage their emotions, establish positive relationships, and make responsible decisions (American Institutes for Research, 2020). Programs that support the development of social and emotional skills can improve students' feelings of safety and increase the frequency of positive social behaviours (American Institutes for Research, 2020).

### **A positive sense of self.**

The third goal of early adolescence is the development of a positive sense of self (Blum, Astone, Decker, & Mouli, 2014). Traditionally, the formulation of one's identity was thought to be the main goal of adolescence (Erikson, 1968). It is now understood that the development of one's identity neither begins nor ends during adolescence. Rather, adolescence is the first time that individuals have the cognitive capacity to consciously determine who they are (American Psychological Association, 2002). Consequently, the development of a positive sense of self is just one of four goals of early adolescence.

A person's sense of self is often referred to as their self-concept—a description of one's self (Findlay & Bowker, 2009). Research suggests that there are six domains of self-concept: social, competence, affect, academic, family, and physical (Bracken, Bunch, Keith, & Keith, 2000). Researchers in this field investigate an individual's self-concept by creating a profile of self-perceptions across these differing domains (Manning, 2007). A well-established self-concept is essential for optimal psychological functioning in adolescence (Chen & Yao, 2010); whereas failure to construct a strong identity can lead to poor self-esteem and has previously been associated with depression and underachievement at school (Sanders, 2013). The effect of school on the development of identity is therefore an important factor to consider as adolescents progress towards adulthood.

### **Acquisition of life skills.**

The acquisition of life skills is the fourth goal of adolescence (Blum, Astone, Decker, & Mouli, 2014). Life skills are the “skills that enable individuals to succeed in the different environments in which they live” (Danish, Forneris, Hodge, & Heke, 2004, p. 40). There are a diverse range of skills that can be classified as life skills—both behavioural and cognitive, interpersonal and intrapersonal (Danish et al., 2004). The WHO (1999) identified five types of life skills thought to be relevant across all cultures: decision making and problem solving, creative and critical thinking, communication and interpersonal skills, self-awareness and empathy, and coping with emotions and stress. More recently, Gould and Carson (2008) identified more specific examples of life skills that include, but are not limited to: goal setting, emotional control, and a strong work ethic (Gould & Carson, 2008). Gould and Carson (2008) also explained that to qualify as a “life skill,” the skill, characteristic, or asset needs to be transferrable to other life situations.

It is because of this transferability that life skill development is considered important for adolescents. Adolescence is a time when individuals transition from childhood to adulthood—dependence to independence (Gaete, 2015; Lerner & Spanier, 1980). The success of an individuals’ transition into adulthood is thought to be dependent on the acquisition of life skills that can be transferred from school to work, and from adolescence to adulthood. Life skills are therefore important as they assist adolescents to negotiate challenges and be productive in their community (Desai, 2010; Galagali, 2011).

The achievement of the four goals—engagement with learning, emotional and physical safety, a positive sense of self, and the acquisition of life skills—during adolescence is important to ensure a successful transition into adult life (Blum, Astone, Decker, & Mouli, 2014). As demonstrated, achievement of these goals has been associated with improved

behavioural, educational, and social outcomes for adolescents (Blum et al., 2014). However, these goals are not the only factors to consider when examining adolescent development. It is also important to consider the satisfaction of adolescents' basic psychological needs.

A psychological need is an experience that is essential for personal growth, healthy development, and well-being (Ryan & Deci, 2000, 2017). There are three basic psychological needs: autonomy, competence, and relatedness (Deci & Ryan, 2000). Autonomy is the need to be self-directed, competence is the need to be effective, and relatedness is the need to be emotionally connected to other people (Ryan & Deci, 2017).

Although all people (regardless of age, gender, nationality, or SES) benefit from the satisfaction of basic psychological needs, these needs are especially important to consider in relation to adolescent development. Previous research has demonstrated that need satisfaction is associated with improved psychosocial and educational outcomes for adolescents. For example, need satisfaction is associated with psychological well-being, specifically life satisfaction, and personal growth, as well as enhanced engagement, adjustment, motivation, and achievement in school (Molinari & Mameli, 2018; Poulou & Norwich, 2019; Reeve & Lee, 2019). Furthermore, the greater the need satisfaction experienced, the better an individual's functioning and well-being will be (Reeve & Lee, 2019).

Both intrinsic and extrinsic factors have been found to facilitate an individual's achievement of the four goals of early adolescence and the satisfaction of individuals' basic psychological needs. Intrinsic factors include the individual's physical and mental health; while extrinsic factors include access to institutional resources and academic opportunities; as well as high expectations from teachers and other adult care-givers (Blum, Astone, Decker, & Mouli, 2014).

### **Contextual influences on adolescent development.**

There are a number of theories of development, many of which propose that human development is a complex process of interactions over a period of time (Mahoney, Lowe, Vandell, Simpkins, & Zarrett, 2009), and both within the individual as well as between the individual and their environment (Mahoney et al., 2009). Such theories include: the ecological model of human development (Bronfenbrenner, 1979), the positive youth development perspective, the person–stage–environment fit theory (Eccles et al., 1993), and self-determination theory (Deci & Ryan, 2008). In relation to environmental influences, the ecological model of human development (Bronfenbrenner, 1979), for example, purports that development occurs within four socially organised sub-systems: the microsystem, mesosystem, exosystem, and macrosystem.

The microsystem refers to the individual's relationship with their immediate environment, while the mesosystem refers to the links between two or more settings in which the individual is involved. The exosystem also refers to the links between two or more settings; however, the individual may not be directly involved in one of them. Regarding adolescents, the microsystem could be the person's family or school, the mesosystem could be the relationship between home and school (parents and teachers), and the exosystem could be the relationship between the adolescent's home life and their parent's workplace. Finally, the macrosystem can be thought of as a blueprint for a culture as it includes their belief systems, knowledge, customs, and lifestyle (Bronfenbrenner, 1994).

Advocates of the PYD paradigm also emphasise the duality of person and context (Jones, Edwards, Bocarro, Bunds, & Jordan, 2016; Larson, 2000). PYD is a proactive approach to working with adolescents that emerged from the field of positive psychology (Bean & Forneris, 2016). The PYD framework is a strengths-based model that focuses on

building psychological, social, and cognitive competencies in youth to promote optimal development (Rauscher & Cooky, 2016). Modern PYD approaches focus mainly on adolescents' immediate context such as their family, peers, and school, as they recognise the influence such contexts can have on development (Rauscher & Cooky, 2016).

Similarly, the person–stage–environment fit theory asserts that the fit between an individual's characteristics and the characteristics of their social environment can influence the individual's behaviour, mental health, and motivation (Eccles et al., 1993). Optimal development occurs when there is a good fit between the individual's needs and the opportunities available to them in their social environment; whereas negative outcomes during adolescence can be attributed to a mismatch between the adolescents' needs and the opportunities available to them (Eccles et al., 1993).

Finally, the main assumption of self-determination theory (SDT; Deci & Ryan, 2008) is that all people possess a natural tendency towards healthy growth and development. This tendency is said to be driven by basic human psychological needs (Reeve & Lee, 2019). However, despite this natural tendency towards growth, proponents of SDT also acknowledge that human development is dependent on socio-environmental conditions (Reeve & Lee, 2019), and these can either support or thwart peoples' development and well-being.

Human development is a complex process of interactions, both within the individual and between the individual and their environment, that occur over time (Mahoney, Lowe, Vandell, Simpkins, & Zarrett, 2009). Contexts that can influence adolescent development include the neighbourhood in which the individual lives, their SES, their school, and the recreational/leisure activities in which they participate. Each of these contexts will be discussed in relation to the influence they can have on an adolescent's development.

### *Neighbourhood and socio-economic status.*

An important context in relation to adolescent development is the individual's neighbourhood. Neighbourhoods can either be a positive context for development, providing adolescents with resources and opportunities, or a negative context for development that poses a threat to their well-being (Chetty & Hendren, 2018). The most commonly studied structural aspect of a neighbourhood is SES (Leventhal et al., 2009).

According to the Australian Bureau of Statistics, SES is the “social and economic position of a given individual, or group of individuals, within a larger society” (ABS, 2011, p. 1). Indicators of SES include education, employment, and income (ABS, 2011). Studies examining the influence of SES categorise neighbourhoods as being either socio-economically advantaged (high SES) or socio-economically disadvantaged (low SES) (Anderson, Johnston, & Leventhal, 2019).

Research has shown that neighbourhood SES can influence an individual's development (Anderson, Johnson & Leventhal, 2019; Leventhal, Duépré & Shuey, 2015; Sampson, Morenoff & Gannon-Rowley, 2002). High SES neighbourhoods are associated with achievement and educational attainment, while low SES neighbourhoods are associated with lower achievement and educational attainment (Anderson et al., 2019; Weinberg et al., 2019).

Furthermore, neighbourhood SES can influence (positively or negatively) an individual's social, emotional, and behavioural well-being as well as their educational outcomes (Anderson, Johnson, & Leventhal, 2019; Ludwig et al., 2013; Xue et al., 2005). Many studies have demonstrated that in comparison to their higher SES peers, low SES adolescents are at increased risk of mental health problems, such as low self-esteem, depressive symptoms, and difficult peer relations (McLoyd et al., 2009). Additionally,

associations have been found between low SES and adolescents' involvement in criminal and delinquent behaviours (Leventhal, Dupéré, & Brooks-Gunn, 2009).

Neighbourhoods influence adolescent development indirectly at the level of the individual, the family, and the community, such as through community social organisations and schools (Leventhal, Dupéré, & Brooks-Gunn, 2009). Additionally, as suggested in the ecological model of human development (Bronfenbrenner, 1979), each of these influences interact with other contextual influences to further impact adolescent development (Leventhal et al., 2009). Based on a review of neighbourhood studies by Jencks and Meyer (1990), the institutional resources model conceptualises how neighbourhoods may influence adolescent development (Leventhal & Brooks-Gunn, 2000, 2001). This theoretical model proposes that it is the “quality, quantity, and diversity of community resources” that mediate the influence of a neighbourhood on adolescent development (Leventhal et al., 2009, p. 421).

### ***The influence of schools.***

Schools are one of the most influential community resources regarding adolescents' well-being (Leventhal, Dupéré, & Brooks-Gunn, 2009). Attributes such as the quality, climate, norms, and demographic make-up of the school all affect adolescents' achievement (Leventhal et al., 2009). Disadvantaged neighbourhoods are negatively associated with these school attributes and with adolescents' educational outcomes (Card & Payne, 2002; Jencks & Meyer, 1990). In comparison, higher SES neighbourhoods often have schools of a higher quality with more resources to promote learning than schools in lower SES neighbourhoods (Leventhal et al., 2009).

Proponents of social control theory (SCT; Hirshi, 1969; Sampson & Laub, 1992) believe that it is the strength of the attachments that adolescents have with social institutions that influences behavioural development. Attachments with family, peers, and schools

provide informal social controls that regulate the development of desirable principles and values (Mahoney, Lowe, Vandell, Simpkins, & Zarrett, 2009). Positive attachments to social institutions such as schools are important as they can facilitate social–academic competence as well as diminish the likelihood of deviant behaviours (Mahoney et al., 2009).

Schools are one of the most significant contexts for adolescent well-being and development—second only to the adolescents’ family (Blum, Astone, Decker, & Mouli, 2014). One of the main reasons why schools are so influential is because of the substantial amount of time adolescents spend at school (Gershoff & Lawrence, 2006). However, whether this influence is positive or negative is dependent on a range of factors (Blum et al., 2014).

During adolescence it is important for individuals to gain autonomy, make decisions, and develop leadership skills. It is also important that adolescents develop positive relationships with adults outside of their home. Research conducted by Eccles et al. (1993) demonstrated that the early years of secondary school did not present adolescents with many of these opportunities. Consequently, the climate of the traditional secondary school classroom was thought to undermine students’ motivation (Eccles et al., 1993). In line with person–stage–environment fit theory, Eccles et al. (1993) suggested that it was the mismatch between the students’ needs and their immediate environment (the school/classroom) that resulted in the negative outcomes.

More recent research has highlighted the factors that result in schools having a positive influence on adolescents. For example, PROSPER—an acronym that stands for Positivity, Relationships, Outcomes, Strengths, Purpose, Engagement, and Resilience—is a framework for positive education (Noble & McGrath, 2015). This acronym not only highlights the components that facilitate positive educational and psychosocial outcomes, but



also epitomises the overall desired outcomes of positive education—to see students thrive and succeed (Noble & McGrath, 2015).

While schools are important social institutions for adolescents, traditional teaching methods often fail to engage students (Shernoff & Csikszentmihalyi, 2009). In comparison, school-based extracurricular activities can promote higher levels of flow (Shernoff & Csikszentmihalyi, 2009). As such, it is thought that one way to increase the level of flow experienced at school, and thereby improve the educational engagement of students, is to enhance students' access to school-based extracurricular activities such as sport (Kristjansson, 2012).

### ***The influence of sport.***

Organised recreational activities provide adolescents with another important context for development, and one of the most examined and commonly occurring of these activities in adolescence is sports' participation (Mahoney, Lowe, Vandell, Simpkins, & Zarrett, 2009). Researchers examining the influence of sport participation for adolescents often distinguish between participation in extracurricular and school-based sport. Extracurricular sports are conducted in the community, outside of school hours; are voluntary; and adolescents choose a sport to play, often purely for their own enjoyment. In comparison, school-based sport is conducted, as the name suggests, at school.

Previous research has demonstrated the positive influence participation in sport can have for adolescents (Barber, Eccles, & Stone, 2001; Gore, Farrell, & Gordon, 2001), especially for adolescents living in low SES neighbourhoods (National Research Council and Institute of Medicine, 2002). However, research has consistently shown that people from low SES areas are less likely to participate in sport (Eime, Charity, Harvey, & Payne, 2015; Leventhal, Dupéré, & Brooks-Gunn, 2009), with one reason for this being the relatively high

cost of involvement in extracurricular sport. According to the Australian Sports Commission (2020), the average cost for children (0–14 years) to participate in sport is AU\$925 per year. Consequently, it is important to find more economical ways for adolescents to participate in and benefit from sport.

Occasionally, school-based sport refers to physical education classes, which are compulsory for all Australian students up to Year 10 (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2010). Fundamental to physical education classes in Australia is “the acquisition of movement skills, concepts and strategies to enable students to confidently, competently and creatively participate in a range of physical activities in various contexts and settings” (School Curriculum and Standards Authority, 2017, p. 4). Other forms of school-based sport are varsity or intramural sport, which are similar to extracurricular sport in that they are voluntary, focus on one sport, and take place outside of school hours. They are, however, organised and implemented through the school rather than the community.

Positive outcomes that have been associated with sport participation for adolescents include a higher grade-point average than non-participants, as well as lower rates of depression and suicidal behaviour (Barber, Eccles, & Stone, 2001; Gore, Farrell, & Gordon, 2001). It is the combination of effort, concentration, and intrinsic motivation facilitated through such activities that fosters PYD (Larson, 2000). However, negative outcomes have also been associated with adolescents’ participation in sport. For example, greater use of alcohol and steroids have been associated with intense sport participation (Eccles & Barber, 1999; Garry & Morrissey, 2000; Winnail, Valois, Dowda, McKeown, Saunders, & Pate, 1997), while high levels of stress are associated with participation in competitive sport (Danish, Kleiber, & Hall, 1987; Scanlan, Babkes, & Scanlan, 2005).

Although systematic reviews of school-based sport and physical activity have shown a positive association between participation and children's and/or adolescents' motor performance, self-concept, and academic achievement, simply participating in sport will not necessarily improve adolescent development (Demetriou & Honer, 2012; Holt, 2008; Rasberry et al., 2011). A range of factors, such as the setting and the structure of the activity (rather than the activity itself) can influence whether adolescents experience positive or negative outcomes as a result of sport participation (Biddle & Asare, 2011; Mahoney, Lowe, Vandell, Simpkins, & Zarrett, 2009; Mahoney & Stattin, 2000). Therefore, it is important to investigate the outcomes associated with specific sport contexts. SSPs are an underexamined form of school-based sport.

### **Specialist Sport Programs (SSPs) in Schools**

An SSP is a secondary school sport program through which students specialise in one sport (in place of a range of elective subjects) while being fully integrated into regular academic classes with non-athlete students (Radtke & Coalter, 2007). The aim of the SSP is to develop the students' psychomotor, tactical, and physiological capabilities while the students continue their more conventional academic education (Gross & Murphy, 1990). SSPs are offered in developed countries such as Australia, New Zealand, Canada, the U.K., and the U.S.A., and provide talented sport students the opportunity to enhance their playing and employment opportunities (Harriss & Cibich, 1999).

In the Australian context, enrolment in an SSP is open to all students, including those who live outside a school's catchment area (Harriss & Cibich, 1999). However, selection into an SSP is generally based on the following criteria: a high level (or potential high level) of sporting ability, a high level of coachability, a positive attitude towards sport and school, and a good record of behaviour and school attendance (Harriss & Cibich, 1999). According to

Goddard (1995) some SSPs can be very selective, while others will take any student who applies in order to maximise enrolment numbers. Schools usually allocate around 4 hours of class time per week to SSPs. In the lower secondary years (Years 7–10), this time is split evenly between practical and theoretical work; whereas in the upper secondary years (Years 11 and 12), there is roughly a 70–30% practical–theoretical split (Goddard, 1995).

As well as focusing on skill development, practical sessions aim to develop and maintain students' fitness levels and can also involve weight training and an injury prevention/management focus (Harriss & Cibich, 1999). Theoretical sessions cover topics such as biomechanics and physiology, rules and tactics, nutrition, and sport psychology; as well as time management, alternative sporting career options, and social skills development (Harriss & Cibich, 1999). Through the SSPs, it is also often possible for students to gain umpiring and coaching qualifications.

SSPs are similar to extracurricular sports in that the adolescent must choose to dedicate a certain amount of time to their involvement in the sport. The difference is that SSPs are organised and delivered to the students by school staff, with school-based peers. SSPs are also similar to varsity and intramural sports as they focus on one sport and are organised by the school, with the difference being that they are delivered to students partially during school hours in place of other elective subjects; while varsity and intramural sports take place outside of school hours.

It is important to note that SSPs are implemented differently in various parts of the world. Radtke and Coalter's (2007) international review of sport schools highlighted some of the differences in various countries with regard to the amount of time dedicated to training (ranging from 12 hours per week in Belgium to 20 hours per week in France), the time that training takes place (morning or afternoon), and the location of training (at the school or at

local centres of sporting excellence). The review also highlighted the different ways in which schools alter the implementation of the academic curriculum to meet the needs of the specialist students. For example, due to the reduced amount of time available for academic work, some countries allow students to focus on fewer subjects; whereas other countries allow students to have an additional year of study to complete their academic work (Radtke & Coalter, 2007). Due to these differences, what is known about the influence of participation in an SSP in one country cannot be assumed to be applicable in another.

Despite a lack of research examining SSPs, broad claims are made suggesting the positive influence of such programs on adolescents' developmental outcomes. For example, the Department of Education in W.A. states that SSPs can “develop character, teach technical skills and self-discipline, and nurture a love of sport ... [and] ... enable children to compete at the highest levels and develop their skills as athletes both on the field and in the classroom” (Department of Education, 2018, online). However, there has been no research conducted on SSPs in Western Australian schools to support the Department of Education's assertion.

It is important to conduct research on the influence of SSPs on adolescent development, as, although most research has demonstrated the positive influence sport participation can have on adolescent development, this influence is dependent on the structure and context of the program. It cannot, therefore, be assumed that SSPs would have the same influence on adolescent development as other sporting programs. It is also important to focus this research on the influence of participation in an SSP on adolescents from low SES backgrounds, because these adolescents have been found to be more vulnerable than their higher SES peers and could therefore benefit from the potential positive influence of sport. With the cost of extracurricular sport programs acting as a barrier to the inclusion of students from low SES backgrounds, SSPs may be a way for low SES adolescents to benefit

from participating in a sport program without experiencing as many of the barriers to extracurricular sport participation.

### **The Current Thesis**

Adolescence is a critical period of development that ranges from dependence to independence and was traditionally perceived to be a time of risk (Eccles et al., 1993; Ozer, 2017; Sturdevant & Spear, 2002), due to the large number of cognitive, psychosocial, and emotional changes that occur concurrently during this time (Archambault, Janosz, Morisot, & Pagani, 2009; Sanders, 2013). Most adolescents adjust well to the changes that occur (Poulou & Norwich, 2019), and young people are now perceived to be full of potential. Research taking a PYD approach focuses on optimal development and recognises the influence of context on adolescent outcomes (Rauscher & Cooky, 2016).

Contexts can influence adolescent development in a variety of ways. For example, the SES of the neighbourhood in which the adolescent lives. Adolescents from low SES backgrounds are more vulnerable, experience more problems (regarding their physical and mental health, and their behaviour), and often do not have as many positive educational outcomes as those adolescents from higher SES backgrounds (Totten, 2007). In comparison, adolescents living in high SES neighbourhoods have more positive outcomes (Leventhal, Dupéré, & Brooks-Gunn, 2009). One of the reasons for this is because the institutional resources (such as schools, recreational facilities, and activities) in higher SES neighbourhoods are of a better quality than those located in lower SES neighbourhoods (Leventhal et al., 2009).

Schools are one of the most influential institutional resources with regards to adolescent development and well-being (Blum, Astone, Decker, & Mouli, 2014). Schools located in higher SES neighbourhoods generally have more resources to promote learning

than schools in lower SES neighbourhoods. Consequently, schools in higher SES neighbourhoods are thought to be of a higher quality (Leventhal, Dupéré, & Brooks-Gunn, 2009). This is also reflected in the research demonstrating that lower SES is associated with negative educational outcomes such as lower rates of school attendance, academic achievement that is below the national standard, and lower secondary school completion rates (ABS, 2011; Hancock, Shepard, Lawrence, & Zubrick, 2013; Lamb, Jackson, Walstab, & Huo, 2015). However, schools are not the only influential context for adolescent development.

Organised recreational activities (such as sport programs) often represent a better fit for adolescents than other contexts for development (Mahoney, Lowe, Vandell, Simpkins, & Zarrett, 2009). Recreational activities have been found to mediate adolescent well-being by having a positive influence on adolescents' psychosocial outcomes (Leventhal, Dupéré, & Brooks-Gunn, 2009). Specifically, participation in organised recreational activities has been positively associated with attachment and engagement with school; as well as parent–adolescent, coach–adolescent, and peer relationships (Mahoney et al., 2009). Organised recreational activities can therefore facilitate PYD because they concentrate on developing skills and competencies, as well as preventing problems (Mahoney, et al., 2009; Roth, Brooks-Gunn, Murray, & Foster, 1998).

There are many different organised recreational activities in which adolescents can become involved; one of the most popular being sport. Sport-based programs influenced by the PYD paradigm focus on building adolescents' cognitive, psychological, and social competencies alongside their physical competencies (Rauscher & Cooky, 2016). It is thought that the skills developed through such PYD inspired sport-based programs can be transferred to other areas of the individual's life (Petitpas, Cornelius, Van Raalte, & Jones, 2005). Such activities will most likely result in positive developmental outcomes if they are implemented

consistently, offer frequent and lasting opportunities for participation, and foster links with other developmental contexts such as home and school (Roth, Brooks-Gunn, Murray, & Foster, 1998).

Most research examining youth programs demonstrates the positive influence they can have, especially for adolescents living in low SES neighbourhoods (National Research Council and Institute of Medicine, 2002), however such adolescents often have limited access to such programs (Leventhal, Dupéré, Brooks-Gunn, 2009). According to the institutional resources model, adverse adolescent adjustment (such as mental health problems and delinquency) can be accounted for by a lack of youth recreational programs in the neighbourhood (Leventhal et al., 2009). As such, it is important to find alternate ways for adolescents living in low SES areas to participate in recreational activities.

Further, Poulou and Norwich (2019) stated that it is “imperative to identify the protective factors that teachers could manipulate within a school context” so that the needs of at-risk adolescents are met (p. 1). By identifying such factors, teachers could facilitate adolescent adjustment and even prevent the exacerbation of students’ problems (Poulou & Norwich, 2019). SSPs could be one such modification to conventional education. SSPs are an underexamined activity that combines the best features of two different contexts for adolescent development: a sporting program and secondary school.

### **Aim.**

The overarching purpose of the current study was to investigate the educational and psychosocial development of adolescents involved in SSPs in low SES areas of Perth, W.A. In order to accomplish this, four studies were conducted: a systematic review of the influence of SSPs on adolescent development; a qualitative exploration of students’, parents’, teachers’, and graduates’ experiences of SSPs; and two quantitative studies investigating students’



educational and psychosocial development over the period of a year. Previous research has demonstrated the positive influence of both school and sport on adolescents' development. As such, it was anticipated that SSPs would also be found to have a positive influence on adolescents' educational and psychosocial development.

### **Research design.**

The current study used both quantitative and qualitative methods (see Table 1), both of which have numerous strengths, but also limitations. Quantitative analyses are criticised because the information they provide is detached from its real-world context; while qualitative research is often criticised for its small sample sizes and lack of generalisability (Castro, Kellison, Boyd, & Kopak, 2010). However, in combination these methods can negate some of the limitations that each method experiences on its own (Castro et al., 2010).

Purposive sampling was used to recruit schools in W.A. that offer SSPs into the study. The W.A. Department of Education's website was used in order to identify secondary state schools that offer "Approved Specialist Sports Programs." Students attending these schools, and their parents, as well as teachers and graduates of the SSP, were invited to participate in the research.

The Index of Community Socio-Educational Advantage (ICSEA) scale was used to determine the SES of the schools recruited into the study. This scale was effectively used to determine the SES of schools in Blomfield and Barber's (2011) study of Australian adolescents' self-concept in relation to their developmental experiences in extracurricular activities. The ICSEA compiles information such as the student's home address and their parent's level of education, occupation, and income; as well as outlining the school's location (metropolitan or regional) and the number of Indigenous students enrolled at the school. Each school is then given a number on a scale to identify its socio-educational advantage in

comparison to other schools in W.A. The median score on the index is 1000 (with a standard deviation of 100) and the scores range from 500 (extremely educationally disadvantaged) to 1300 (very educationally advantaged). For the purpose of this study, schools with an index below the mean of 1000 were classified as low SES.

The current study was approved by the Human Research Ethics Committee at Edith Cowan University and the Department of Education, W.A. Letters of approval are attached (Appendices A–C). Information letters and consent forms (Appendices D–G) were then distributed to and through the schools.

Table 1

*Research Design*

Study	Description
1	<p>Systematic Literature Review</p> <p>Search multiple databases and evaluate the existing research on SSPs to determine if participation in an SSP influences adolescent's developmental outcomes.</p>
2	<p>Qualitative</p> <p>Explore the perceptions of the specialist students, their parents, as well as teachers and graduates of the SSPs, regarding the influence of participation in SSPs for adolescents attending schools located in low SES areas of Perth, W.A. These perspectives are important in understanding the breadth of impact that participation in an SSP can have on adolescents' development.</p>
3	<p>Quantitative: Psychosocial</p> <p>Examine the influence of participation in an SSP on adolescents' psychosocial development. Specifically, to investigate if participation has a positive influence on specialist students' physical self-perceptions, social competence, resilience, basic psychological needs satisfaction, and life satisfaction, over the period of a year.</p>
4	<p>Quantitative: Educational</p> <p>Determine the influence of participation in an SSP, on adolescents' educational outcomes. Specifically, to investigate if participation in a SSP has a positive influence on specialist students' academic achievement and school engagement levels, over the period of a year.</p>

For the systematic literature review, a comprehensive search of six databases was conducted to identify pertinent research. Directed content analysis was then used to extract data from these studies. The results were reported through a narrative synthesis.

The qualitative investigation used semi-structured interviews to examine the perceptions of specialist students, their parents and teachers, as well as graduates of the program. A pilot study was initially conducted to determine the appropriateness of the

interview schedules used; a process that is recommended as it allows for adjustments to be made, as necessary, to the order and wording of the interview questions (Weissensteiner, Abernathy, & Farrow, 2009). The finalised interview schedules are presented in the Appendix (H–K). Interpretative phenomenological analysis (IPA), which takes into consideration the perspectives of the individuals involved in the experience, was then used to analyse the data generated.

For the quantitative studies, data measuring the educational and psychosocial development of specialist and non-specialist students were collected twice over the period of a year to allow for a comparison over time as well as between student groups. The educational variables of interest were the students' academic achievement and their level of engagement with school. The psychosocial variables were the students' physical self-perceptions, basic psychological needs satisfaction, life satisfaction, resilience, and social competence.

Permission to use the scales measuring students' educational and psychosocial development was received and the scales were compiled and administered online through Qualtrics survey software. The administration of the scales through Qualtrics makes the distribution and collection of quantitative data more efficient than six individual paper-based scales. The online survey containing the measures also gathered demographic information such as the students' name, age, school, and whether or not they were a participant of the SSP. A mixed repeated measures ANOVA was planned for each of the educational and psychosocial variables.

The quantitative research was also initially examined through a pilot study to ensure the scales used were easily understood and accessible online by the students. The data

collected for the quantitative and qualitative pilot studies were not used in the final data analysis.

A number of studies have demonstrated that meaningful participation in school and sport activities can protect adolescents from the possible disadvantage they face due to living in a low SES neighbourhood. However, to date, no study has investigated the development of adolescents participating in SSPs located in low SES areas. To overcome this problem, the current dissertation examines the educational and psychosocial development of adolescents participating in SSPs located in low SES areas of Perth, W.A.

## SECTION 2

## **Preface to Study 1**

Most research examining organised recreational activities demonstrates the positive influence they can have, especially for adolescents living in low SES neighbourhoods (National Research Council and Institute of Medicine, 2002). However, adolescents living in low SES neighbourhoods often have limited access to such programs (Leventhal, Dupéré, Brooks-Gunn, 2009). School-based sport may provide adolescents living in low SES areas the opportunity to experience the positive outcomes associated with sport participation without experiencing as many of the barriers.

An underexamined form of school-based sport is the Specialist Sport Program (SSP). It cannot be assumed that participation in an SSP will result in positive outcomes for the adolescents involved, as the structure and context of the organised recreational activity plays an important part in the development of positive outcomes (Biddle & Asare, 2011; Mahoney & Stattin, 2000). As such, it is important to determine what is already known with regard to the influence of participation in an SSP on adolescents' development.

The overarching purpose of this dissertation was to investigate the educational and psychosocial development of adolescents involved in SSPs in low SES areas of Perth, W.A. To begin, Study 1 collates and evaluates the existing literature on SSP participation to provide an overview of the influence (if any) SSPs can have on adolescents' developmental outcomes.

## **Study 1**

### **Influence of Specialist Sport Programs (SSPs) on Adolescent Development: A Systematic Literature Review**

In 2016, researchers from eight countries published a consensus statement outlining the positive influence of physical activity on the physical, cognitive, psychological, and social outcomes of children and adolescents (Bangsbo et al., 2016). Physical activity, defined as “any bodily movement produced by skeletal muscles that requires energy expenditure” (World Health Organization, 2014, p. 1), is, however, a very broad construct. It is therefore important for researchers to differentiate between the various types of and settings for physical activity.

Rasberry et al. (2011) conducted a systematic review of the effects of school-based physical activity on the association between participation in school-based physical activity (including physical education) and academic performance (achievement, behaviour, skills, and attitudes). There were 251 associations identified within 43 of the included studies. Just over half of the associations between school-based physical activity and academic performance were positive. While 48% of the associations identified were not significant, only 1.5% of the associations were negative. Taken together, these results suggest that participation in school-based physical activity could enhance academic performance, rather than detract from it (Rasberry et al., 2011). Despite these positive findings, previous research has shown that participation in physical activity declines during adolescence (Zimmerman-Sloutskis, Wanner, Zimmerman, & Martin, 2010).

Sport is one particular form of organised physical activity that is usually team-based and competitive (Eime, Young, Harvey, Charity, & Payne, 2013). A systematic review of sport participation for children and adolescents found a variety of psychological and social



health benefits to be associated with community sport participation (Eime et al., 2013). Two of the most common benefits associated with sport participation were improved self-esteem and fewer depressive symptoms. In fact, Eime et al. (2013) stated that “Sport may be associated with improved psycho-social health above and beyond improvements attributable to participation in PA [Physical Activity]” (p. 1), which demonstrates the importance of participation in sport specifically.

It has been suggested that healthy adolescent development can be promoted through participation in sport (Sport for Development and Peace International Working Group, 2006). Systematic reviews of school-based sport and physical activity have shown that children and adolescents who are more involved in sport and physical activity report better motor performance, self-concept, and academic achievement (Eime et al., 2013; Rasberry et al., 2011). However, simply participating in sport will not necessarily improve adolescent development (Holt, 2008). Previous research has shown that the structure and context of the activity (rather than the activity itself) play an important role in the development of positive outcomes (Biddle & Asare, 2011; Mahoney & Stattin, 2000).

One specific type of school-based sport is the SSP. SSPs allow students to specialise in one sport in place of a range of elective subjects in secondary school. The aim of the SSP is to develop the students’ psychomotor, tactical, and physiological capabilities while the students continue their more conventional education (Gross & Murphy, 1990). As such, SSPs provide talented sport students the opportunity to enhance their playing and employment opportunities (Harriss & Cibich, 1999).

SSPs integrate education and sport development in the context of a mainstream secondary school (Radtke & Coalter, 2007). SSPs can therefore be classified as a specific context of school-based sport (Pope, 2002). However, SSPs are different to more traditional

school-based sports (such as intramural and varsity sports) as they are delivered to the students partially during school hours in place of other elective subjects; whereas intramural and varsity sports take place either before or after school hours (McKenzie, 2019).

While enrolment in an SSP is open to all students, selection into the program is based on the following criteria: a high level (or potential high level) of sporting ability, a high level of coachability, a positive attitude towards sport and school, and a good record of behaviour and school attendance (Harriss & Cibich, 1999). While some SSPs can be very selective, others will take any student who applies in order to maximise numbers (Goddard, 1995).

As well as focusing on skill development, practical sessions develop and maintain students' fitness levels and can also involve weight training and an injury prevention/-management focus (Harriss & Cibich, 1999). Theoretical sessions cover topics such as biomechanics and physiology, rules and tactics, nutrition, and sport psychology; as well as time management, alternative sporting career options, and social skills development (Harriss & Cibich, 1999). Through the SSPs, students also often gain umpiring and coaching qualifications. Consequently, it is claimed that SSPs “develop character, teach technical skills and self-discipline, and nurture a love of sport” (Department of Education, 2018, online).

One important aspect of SSPs is sport specialisation. Although participation in physical activity and sport has been found to have a positive influence on youth development, sport specialisation has been reported to have detrimental effects on youth development (Hecimovich, 2004). Such negative outcomes include burnout and motivational loss, increased stress and pressure, and premature identity foreclosure (Gould, 2010). Additionally, some parents have voiced concerns that time spent in physical education and school sport may interfere with students' academic achievement (Bailey et al., 2009). Facing increased pressure to improve students' academic test scores, many schools consider reducing the

amount of time allocated for physical activity and sport during the school day (Rasberry et al., 2011).

## **Current Review**

Systematic reviews are important for identifying, summarising, and evaluating existing studies, to make the available evidence more accessible (Gopalakrishnan & Ganeshkumar, 2013). Previous reviews have examined the influence of school-based physical activity and sport participation on adolescents' developmental outcomes (Eime et al., 2013). However, SSPs are a relatively new form of school-based sport, the design and implementation of which is different to more traditional programs.

The Department of Education, W.A., claims that SSPs can have a positive influence on participating students, and there is a growing body of international research exploring the influence of participation in SSPs on adolescents' educational and psychosocial outcomes. However, this research is yet to be examined systematically. A review of the research examining SSPs would not only assist in determining the validity of the claims made but could also guide future research.

Thus, the aim of the current review was to collate and evaluate the existing research on SSPs to determine if participation in an SSP influences adolescents' developmental outcomes; and if so, whether this is a positive or negative influence.

## **Methods**

### **Inclusion/Exclusion Criteria**

The criteria used to determine a paper's relevance to this review were:

1. Studies published in English.

2. No pre-specified date range was imposed as the aim of this review was to collate and evaluate all of the existing research on SSPs.
3. Original research or reports published in a peer-reviewed journal.
4. Studies that presented data that addressed the influence of participation in a Specialist Sport Program. As such, the data were focused on the outcomes of secondary school students (aged 12–17 years).

Studies that solely focused on traditional school-based sport participation were excluded from this review. For example, physical education, varsity, intramural, or extracurricular sport. This distinction was made as the structure and context of SSPs varies greatly from more traditional school-based sport.

The title and abstract of each paper were screened against the criteria to ensure only the most relevant studies were included in this review. If the abstract did not provide sufficient detail to allow a decision on inclusion to be made, the paper was then read in full before deciding whether the paper was retained.

## **Search Strategy**

A systematic search of six electronic databases was conducted in 2016 and revised in 2017. The databases searched included: A+ Education, Academic One File, Ausport, Edith Cowan University Library database, Proquest Psychology Journals, and Psych Info.

The following keywords were used to search the databases:

1. “Specialist sports” and “school”
2. “Specialist sports” and “academy”
3. “Specialist schools” and “sport”
4. “Specialist academy” and “sport”

These keywords were considered to directly address the topic under consideration. More explicit search terms, referring to specific outcomes (such as: academic achievement, life satisfaction, resilience, etc.) were not included so as to ensure all of the available research on the influence of SSPs on adolescent's developmental outcomes was included. This search was supplemented by an examination of the reference list of included studies, and a search of previously collected articles, to identify any studies published that were not detected by the keyword search terms.

### **Study Selection**

Figure 1 provides a summary of the stages of study selection. Titles and abstracts were screened for relevance before the articles were read in full and assessed to ensure they met the inclusion criteria.

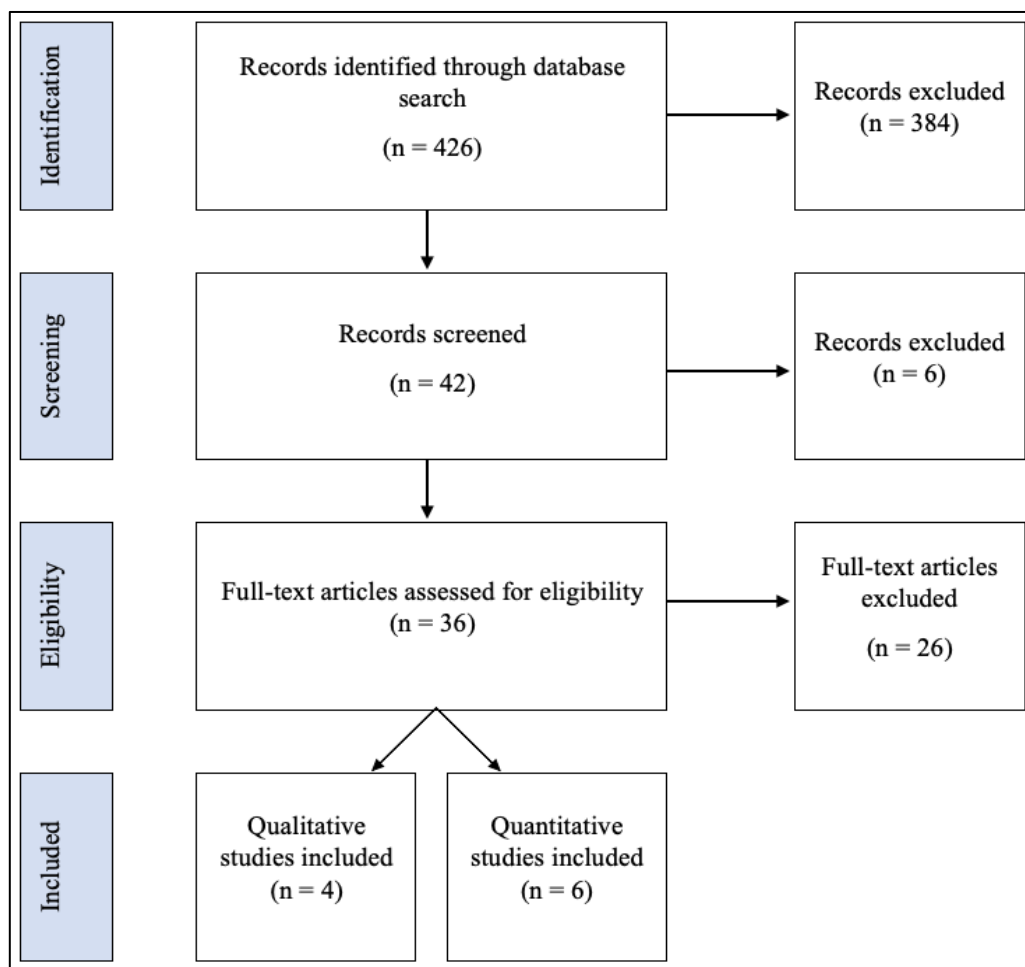
### **Data Collection and Analysis**

Data extracted from each of the studies included: country; sample size, age, and gender; sport played; variables examined; measures used; and analysis conducted. Extracted data are presented in Table 2.

Following the lead of Caddick and Smith (2014) a form of content analysis was used to extract the relevant themes and determine the initial coding categories. Content analysis was used because there was a diversity of outcomes under investigation and a variety of measures used to examine the influence of these outcomes. As such, a narrative synthesis, which involves creating a summary to explain the results of multiple studies by integrating and interpreting their findings (Swann, Keegan, Piggot, & Crust, 2012), was deemed to be most appropriate for the current review.

Figure 1

*Stages of Study Selection*



**Quality Assessment**

Study quality was objectively appraised using the Critical Appraisal Skills Program (CASP) checklist (Public Health Resource Unit, 2007). The CASP developed a range of checklists to assess the quality of studies included in a systematic review (CASP, 2017). The validity of the CASP checklists was demonstrated by Fraser and Sayah (2011) who also developed a numeric rating system; previously lacking in the CASP checklist. One point was assigned if the criterion was met, and zero if it was not met. The criteria that make up the checklist focus on research design, sampling, data collection, reflexivity, ethical issues, data analysis, findings, and research value. The total possible score for the qualitative studies was

10, and for the quantitative (case-control and cohort) studies was 9. The results of the quality assessment are also presented in Table 2.

Table 2

*Studies Investigating the Developmental Outcomes of Adolescents Participating in SSPs*

Reference and Country	Classification	Sport	Sample	Variables, Measures, and Analysis	Findings	Quality Score
1 Levačić and Jenkins (2006) England	Educational	N/A	National Dataset: Comparison of schools with and without SSPs	Academic achievement General Certificate of Secondary Education (GCSE) Regression analysis	SSPs have a significant positive effect on the GCSE scores of male and female students	9/9
2 Taylor (2007) U.K.	Educational	N/A	National Dataset: Comparison of schools with and without SSPs	Academic achievement GCSE Regression analysis	SSPs raise scores by 1 point; low SES schools benefit more from SSPs	9/9
3 Jones, Polman, and Peters (2009) England	Psychosocial	N/A	605 students 12–15 years 138 independent school students (63% male) 230 comprehensive school students (53% male) and 237 sport school students (49% male)	Physical self-perceptions; global self-esteem; physical self-worth (PSW) Children and Youth Physical Self-Perception Profile (CYPSP) and Children and Youth Perceived Importance Profile (CY-PIP) Cross-sectional 3-way MANOVA	Males in independent and sport colleges scored significantly higher on Condition, Body, Strength, and PSW than males in comprehensive schools	8/9



Reference and Country	Classification	Sport	Sample	Variables, Measures, and Analysis	Findings	Quality Score
4 Graham, MacFayden, and Richards (2012) U.K.	Psychosocial	N/A	78 students 12–13 years 16 Specialist Language Program students 29 SSP students, and 33 general students (gender not identified)	Feelings of being identified as “gifted & talented” Perceptions of the characteristics of “highly-able” learners Author-developed questionnaire Frequency analysis	Both groups were enthusiastic about the idea of being “highly-able,” however, SSP students were more enthusiastic Characteristics of “highly-able” sport students related to: fitness, strength, health, and athleticism	9/9
5 Laurin and Nicolas (2009) France	Psychosocial	Soccer	81 students 15 years (male only)	Conscientiousness; soccer self-determination; school self-determination; satisfaction with SSP 48-item revised NEO Personality Inventory scale; Sport Motivation scale; Academic Motivation scale; Soccer Trainee Adjustment scale Pearson correlations; repeated measures ANOVA; step-wise regression	Conscientiousness, soccer- and school self-determination are related to satisfaction with SSP experiences Conscientiousness strongly related to satisfaction with SSP experiences Level of satisfaction and soccer self-determination decrease over time	9/9

Reference and Country	Classification	Sport	Sample	Variables, Measures, and Analysis	Findings	Quality Score
6 Marsh, Morin, and Parker (2015) Australia	Psychosocial	Most major sports (e.g., basketball, softball, rugby league, soccer, baseball, swimming, track and field, dance aerobics, cricket, and netball)	1,268 students 10–14 years 478 SSP (57% male), and 790 non-SSP attending the same school (53% male)	Physical self-concept  The global physical scale from the Physical Self-Description Questionnaire;  Latent cohort sequence model; MIMIC model	Significant difference between SSP and non-SSP in the first year that declines over subsequent years; group difference no longer significant in final year	9/9
7 Light and Kirk (2000) Australia	Psychosocial	Rugby	15 SSP students (male only)  Age not identified	Hegemonic masculinity  Case study of an SSP at an elite independent school; Observations; In-depth semi-structured conversational interviews; Field notes; Video analysis	The school demonstrated a class-specific form of masculinity; masculinity connected to ideals of physical domination, competitiveness, toughness, team-work, and self-restraint; hegemonic masculinity was continually contested and forced to adapt;	8/10

Reference and Country	Classification	Sport	Sample	Variables, Measures, and Analysis	Findings	Quality Score
					hegemonic masculinity was reproduced through corporeal and discursive regimes focused on the body	
8 Sagar, Lavallee, and Spray (2007) U.K.	Psychosocial	N/A	9 SSP students 14–17 years (55% male)	Perceptions of the consequences of failure  Interviews with students participating in a variety of SSPs at one school	Ten higher-order themes: diminished perceptions of self, no sense of achievement, emotional cost of failure, letting down significant others, negative social evaluation, loss of motivation and drop-out, tangible losses, an uncertain future, thoughts of failure re-occurring, and intangible losses	10/10
9 Camiré, Trudel, and Bernard (2013) Canada	Elements	Ice hockey	29 participants consisting of: 14 SSP students 16–17 years (male only) 1 principal 1 program director 6 coaches 7 parents (57% male)	Strengths of an SSP  Case study	Strengths of an SSP include a comprehensive approach to teaching life skills and values, and the SSP teachers' ability to foster relationships with the players	10/10

Reference and Country	Classification	Sport	Sample	Variables, Measures, and Analysis	Findings	Quality Score
10 Olushola, Jones, Dixon, & Green (2013) U.S.A.	Elements	Basketball	Unknown number of SSP students (all female) age not identified 12 graduates (all female) 4 mentees 4 parents 7 school staff the coach's family 1 manager; and other community members	Components of an SSP that lead to long-term benefits Case study; semi-structured interviews	Key values that underpin the success of the program include: family, education, discipline, and civic engagement  Successful programs need a flexible design and commitment to the program values	9/10

## **Results**

### **General Overview of Included Studies**

A total of 426 articles were initially identified, with screening reducing this number to 42. However, only 10 articles were considered suitable for inclusion in this review; the other articles were either duplicates, or further reading revealed that SSPs were not the focus of the investigation. Table 2 provides a summary of the 10 studies that met the inclusion criteria.

Of the 10 studies included in the review, five were conducted in the United Kingdom (U.K.), two in Australia, and one each in Canada, France, and the United States of America (U.S.A.). The context of the studies varied greatly. One study stated that the school involved in their research was located in an economically disadvantaged area. Two studies described the schools involved in their research as being elite, private schools. This description of the schools involved suggests that the students attending these schools were from higher SES backgrounds, as their parents could afford to pay school fees for them to attend. However, the majority of studies did not specify the socio-economic background of the students or schools involved in their research.

Early adolescence has been defined as from 10–14 years of age, middle adolescence from 14–16 years, and late adolescence from 17–19 years (UNICEF, 2005). According to this classification, two studies involved early adolescent students and one involved middle adolescent students. Three studies involved students spanning early to middle adolescence ranges, one involved students spanning middle to late adolescence, and one study involved students spanning early, middle, and late adolescence. Two studies did not state the age of the students involved in their research, simply describing them as secondary school students.

Only seven studies stated the gender of the participants. More than half of the participants (56.8%) in these seven studies were male.

With regards to the amount of time spent in the SSP, one study stated that students participated in a “condensed academic schedule” whereby they attend academic classes in the morning and SSP classes in the afternoon (Camiré, Trudel, & Bernard, 2013). The other nine studies did not explain how the SSP classes were integrated with academic classes, or the balance of time spent in either SSP or academic classes. Furthermore, while several studies explained that students could remain involved in the SSP for the duration of their secondary education, none highlighted whether the students chose to remain in the program or dropped out.

Five studies identified the sport that students played through the SSP. Four of these studies examined SSPs that focused on one sport only. These were: basketball (Olushola, Jones, Dixon, & Green, 2013), ice hockey (Camiré, Trudel, & Bernard, 2013), rugby (Light & Kirk, 2000), and soccer (Laurin & Nicolas, 2009). In another study, the authors stated that students could enrol in “most major sports (e.g., basketball, softball, rugby league, soccer, baseball, swimming, track and field, dance aerobics, cricket, and netball)” but did not specify the number of students enrolled in each sport (Marsh, Morin, & Parker, 2015, p. 155). The other five studies included in this review did not state the sport that students played through the SSP.

To examine the influence of participation in an SSP, researchers used quantitative methods in six of the studies and qualitative methods in the other four studies. Of the six quantitative studies, four were case-control studies and two were cohort studies. The case-control studies compared students involved in SSPs to students not involved in SSPs on outcomes such as academic achievement (Levačić & Jenkins, 2006; Taylor, 2007), physical self-perceptions, global self-esteem, and physical self-worth (Jones, Polman, & Peters, 2009), and feelings of being identified as “gifted and talented” and perceptions of the characteristics of “highly-able” learners (Graham, MacFayden, & Richards, 2012). The cohort studies

examined specialist students' developmental outcomes, such as their conscientiousness, self-determination, and satisfaction (Laurin & Nicolas, 2009), and their physical self-concept (Marsh, Morin & Parker, 2015) over time.

The qualitative studies varied in the methods used. One study (Light & Kirk, 2000) used grounded theory to examine the relationship between specialist students' experiences of rugby training and the embodiment of hegemonic masculinity. Another study (Sagar, Lavalley, & Spray, 2007) used thematic analysis, drawing on principles of grounded theory to explore specialist students' perceptions of the consequences of failure. Camiré, Trudel, and Bernard (2013) also used thematic analysis in their examination of an SSP specifically designed to teach students life skills and values. In comparison, Olushola, Jones, Dixon, and Green (2013) took an interpretative case study approach to determine the components of an SSP that led to long-term benefits for African-American girls. Two of the qualitative studies only interviewed students involved in the SSP, while the other two studies interviewed a mix of students, teachers, and parents.

The CASP checklists were used to assess the quality of the studies included in the review (see Table 2). The qualitative studies received scores of 8 or above out of a possible 10. The quantitative studies received scores of 8 or above out of a possible 9. As such, all studies included in this review have been categorised as high quality.

A second person—a PhD candidate in the School of Arts and Humanities at Edith Cowan University—also rated the studies to measure inter-rater reliability. Cohen's Kappa revealed fair agreement between raters for Items 6 ( $k = .375, p = .25$ ) and 7 ( $k = .240, p = .51$ ) for the qualitative studies, and Item 6 ( $k = .375, p = .25$ ) for the case-control studies. Raters did not agree on Item 9 for the assessment of qualitative studies, or Items 4 and 5 for the assessment of case-control studies. The raters discussed their reasons for the score they

provided and came to a consensus on those items. Statistics were not calculated for the other items as there was agreement between the raters.

Although there was a wide variety of outcomes examined in the included studies, the studies can generally be categorised as those investigating the educational outcomes associated with participation in an SSP, those investigating the psychosocial outcomes associated with participation in an SSP, and those exploring the elements of SSPs perceived to be influential in facilitating positive outcomes for the adolescents involved.

### **Educational Outcomes Associated with SSPs**

Two studies in the U.K. (Levačić & Jenkins, 2006; Taylor, 2007) compared the academic performance of schools that offer SSPs to schools that do not offer SSPs. The General Certificate of Secondary School Examination (GCSE) results were used in both studies to measure academic performance. The GCSE is a standardised measure for examining students' academic achievement in the final compulsory year of education. The results of the GCSE are used to rank order schools into league tables to distinguish between “successful” and “unsuccessful” schools, based on the proportion of students at the school who attain five or more A\*–C grades (Putwain, 2008). Although the effect size was modest, Levačić and Jenkins (2006) found that the academic performance of schools that offer SSPs had improved more over time than schools with either specialist language or arts programs, or schools that did not offer any specialist program.

Taylor (2007) also found that schools offering SSPs had better academic performance in the GCSE than schools that did not offer SSPs, however the margin of difference between these school types was less than previously observed by Levačić and Jenkins (2006). Additional analyses reported by Taylor revealed that the improvement in academic



performance over time for schools with SSPs was greater at schools with a high percentage of students from low SES backgrounds.

### **Psychosocial Outcomes Associated with SSPs**

As well as examining the educational outcomes associated with participation in an SSP, some of the studies included in this review examined the psychosocial outcomes associated with participation in an SSP. The psychosocial outcomes investigated by the studies included: the relationship between specialist students' conscientiousness, soccer, and school self-determination, as well as their satisfaction with the SSP (Laurin & Nicolas, 2009); specialist and non-specialist students' perceptions of the characteristics of "highly-able" learners and the specialist students' feelings of being identified as "gifted and talented" (Graham, MacFayden, & Richards, 2012); the physical self-perceptions of specialist and non-specialist students (Jones, Polman, & Peters, 2009; Marsh, Morin, & Parker, 2015); specialist students' perceptions of the consequences of failure (Sagar, Lavalley, & Spray, 2007); and specialist students' experiences of training in an SSP and the embodiment of hegemonic masculinity (Light & Kirk, 2000).

#### **Conscientiousness, self-determination, and satisfaction.**

Laurin and Nicolas (2009) examined SSP students' self-reported conscientiousness—one of the Big Five personality characteristics (McCrae, Costa, & Martin, 2005)—by administering the NEO Personality Inventory scale once at the mid-point of the year. They also examined the students' satisfaction with the SSP and self-determination for school and sport by administering the Soccer Trainee Adjustment scale, and the Sport and Academic Motivation Scales three times during the school year. Laurin and Nicolas found that students' satisfaction for the SSP was related to both their level of conscientiousness and their level of self-determination. More specifically, the students' satisfaction levels rose as their self-

determination increased over the course of the year. They also found that students' soccer self-determination (and consequently, their satisfaction levels) decreased over time. However, due to the strong positive relationship between conscientiousness and satisfaction, students with a high level of conscientiousness were found to be able to maintain high levels of satisfaction despite the general decrease in self-determination (Laurin & Nicolas, 2009).

### **Characteristics of specialist students and feelings regarding “high-ability.”**

Graham, MacFayden, and Richards (2012) sampled students from two schools that offered both a specialist language program and an SSP to examine non-specialist students' perceptions of specialist students. Data collected through questionnaires created by Graham et al. revealed that the characteristics most commonly used to describe SSP students were “sporty” and “fit.” In comparison, the characteristics used to describe students in the specialist language program were “smart” and “brainy.”

Graham, MacFayden, and Richards (2012) also examined how specialist students felt about being identified as “highly-able.” Students were asked to select the words (from a list of 12) which most accurately described how they felt about being identified as highly-able in their chosen specialist program (sport or languages). Alternatively, the students could write down their own words to describe their feelings. Graham et al. then compared the feelings of SSP students to those of students involved in specialist language programs. Overall, the students involved in the SSPs were found to be more enthusiastic about the idea of being highly-able than those students involved in the specialist language programs.

### **Physical self-perceptions.**

Two studies included in the current review (Jones, Polman, & Peters, 2009; Marsh, Morin, & Parker, 2015) examined the impact of participation in an SSP on students' physical self-perceptions. Jones, Polman, and Peters (2009) used the Child and Youth Physical Self-

Perception Profile (CYPSPP; Whitehead, 1995), while Marsh, Morin, and Parker (2015) used the global physical scale from the Physical Self-Description Questionnaire (Marsh, Martin, & Jackson, 2010).

Jones, Polman, and Peters (2009) compared the physical self-perceptions of students attending two government schools with SSPs, to students attending one independent school and two government schools all without SSPs. Jones et al. demonstrated that the male, but not the female, students' physical self-perceptions were influenced by school type. That is, male students participating in an SSP and those attending an independent school scored significantly higher than their counterparts attending government schools without an SSP on four of the five sub-scales of the CYPSPP (Condition, Body, Strength, and PSW).

Marsh, Morin, and Parker (2015) also compared the physical self-perceptions of SSP participants with students who did not participate in the SSP. However, unlike Jones et al. (2009) their entire sample came from the one elite, private school. Marsh et al. (2015) administered the global physical scale twice a year for 2 years. The analysis of the data collected demonstrated that students involved in the SSP had significantly higher physical self-concepts than their non-participating peers at the same school.

### **Perceptions of the consequences of failure.**

Sagar, Lavalley, and Spray (2007) analysed interviews conducted with SSP students to determine the most commonly perceived consequences of failure in order to better understand specialist students' fear of failure. The interviews guided students to think about past experiences of a sporting failure and to choose a few words to summarise their experience of this failure. Additionally, students were asked to imagine a future failure that they would perceive to be aversive. All students perceived failure in regard to losing a competition and a diminished perception of self was found to be the most commonly

perceived consequence of failure. Other consequences included the emotional cost of failure, such as negative moods and emotions, and a lowered sense of achievement.

### **The embodiment of hegemonic masculinity.**

Light and Kirk's (2000) study explored specialist students' experiences of training in an SSP and the embodiment of hegemonic masculinity at an all-boys school. Hyper-masculinity is the exaggeration of stereotypically masculine characteristics (Craig, 2009). Negative characteristics including violence, risk-taking, promiscuity, as well as the tendency to hide one's feelings often serve the purpose of proving one's masculinity (Smiler, 2016). Light and Kirk (2000) found that antisocial behaviours, such as bullying from senior students, were perceived by the students as essential for learning to become a man. They concluded that tradition shaped the style of training and game played and validated negative power relations. As such, tradition was seen to play an important role in the continuation of the dominant class-specific style of masculinity at the school.

### **The Influential Elements of an SSP**

The studies discussed so far have shown that SSPs have the potential to influence students' educational and psychosocial outcomes. The studies discussed below explore the elements of the SSP that are perceived to be influential in fostering positive developmental outcomes. Two studies (Camiré, Trudel, & Bernard, 2013; Olushola, Jones, Dixon, & Green, 2013) included in this review reported on the elements of the SSPs that were perceived to be influential in fostering positive developmental outcomes for the adolescents involved.

Camiré, Trudel, and Bernard (2013) conducted a case study of an SSP designed to teach students life skills and values as well as develop the students' sport-specific skills. The program consisted of three training sessions, two conditioning sessions, and two developmental classes per week. The developmental classes were aimed at teaching the

students life skills and values and, in the first week, students were required to select the values that they would like to live by (such as fairness, respect, and honesty) and “identify the behaviours needed to live according to those values” (Camiré, Trudel, & Bernard, 2013, p. 196). To develop a relationship with the students, the SSP teachers encouraged their students to write in journals. The SSP teachers read these journals to gain an insight into the students’ lives, which provided them with the opportunity to start a conversation with the student. The SSP teachers also made use of teacher–student–parent meetings as a means of establishing open communication. Interviews conducted with SSP students, their parents, and school staff found that the values promoted through the program played an important role in fostering positive outcomes for the students involved. The participants reported that the strength of an SSP lay in its comprehensive approach to teaching life skills, such as organisation, and in the SSP teachers’ ability to foster positive relationships with players.

Olushola, Jones, Dixon, and Green (2013) also conducted a case study of an SSP to determine the components of the program that influenced its success in promoting positive outcomes. Unlike the school involved in Camiré et al.’s (2013) study, the SSP examined by Olushola et al. (2013) was at a school located in an economically disadvantaged area. Interviews with past and present players as well as other key stakeholders were analysed, and four core values were found to underpin the success of an SSP. These were: family, education, discipline, and civic engagement. According to the participants, the SSP met the students’ need for stability and security that their family may not have been able to provide. The SSP also had a positive influence on the students as the teachers were able to present education in a way that was personally meaningful for the student. The participants also reported that SSPs are an ideal environment for students to develop self-discipline that can be applied to their academic work. Furthermore, participants recognised the importance of students having positive relationships with their teammates and community members, which

facilitated civic engagement. Finally, Olushola et al. reflected that as well as promoting these four core values, SSPs need to have a flexible design to cater for the specific needs of their community.

## **Discussion**

Physical activity has been found to have a positive influence on adolescents' developmental outcomes (Bangsbo et al., 2016), however specialisation in one sport can have a detrimental influence on adolescents (Hecimovich, 2004). SSPs are a relatively new form of school-based sport, which integrates education and sport by allowing students to attend regular academic classes and specialise in one particular sport for the duration of their secondary education. As the design and implementation of SSPs is different to more traditional school-based sport programs, researchers have started to investigate the influence of participation in an SSP on adolescents' developmental outcomes. The aim of the current systematic review was to collate and evaluate the existing research regarding the impact of SSPs, to determine whether SSPs influence adolescents' developmental outcomes and, if so, whether this influence is positive or negative. The 10 studies included in this review show that participation in an SSP can influence adolescents' developmental outcomes.

### **General Discussion of the Included Studies**

Only 10 studies investigating the influence of SSPs on adolescents' developmental outcomes were found in a systematic search of the six databases. Considering the number of SSPs that are in operation in Australia alone, there is scope for much more research. It is further noted that despite there being 19 different approved SSPs offered in more than 30 public secondary schools in W.A. alone, only two studies included in the review were conducted in Australia—both of which were located in the eastern states. As such, there is scope for more research to be conducted.

The studies included in this review were located in five different countries. For example, Camiré et al.'s (2013) study was conducted in Canada while Olushola et al.'s (2013) study was conducted in the U.S.A. Although both studies explored the elements of the SSP that were perceived to be influential, every country has a different education system, and SSPs in each country are implemented in a slightly different way. For example, some schools (like the one involved in Camiré et al.'s study) explicitly plan for and teach life skills and values in order to facilitate positive developmental outcomes for the adolescents involved. Other schools placed more importance on the development of adolescents' sporting skills; consequently, the facilitation of educational and psychosocial outcomes was an additional benefit of the program above and beyond its stated purpose.

Furthermore, Camiré et al.'s (2013) study was the only study included in the review to outline the structure and design of the SSP under investigation. As Olushola et al.'s (2013) study found the design of the SSP could influence the development of positive outcomes, it is recommended that future studies also specify the structure and design of the SSP, including details such as the amount of time spent in the program and a general outline of the curriculum of the program.

The majority of studies did not provide contextual information about the schools involved (e.g., whether they were high or low SES). Although only one study (Olushola et al., 2013) investigated an SSP in a low SES area, the results of several studies included in the review suggest that SES may moderate the association between participation and adolescents' developmental outcomes. For example, Taylor (2007) found the academic performance of schools with a higher percentage of low SES students improved more over time than schools with lower percentages of low SES students. Jones, Polman, and Peters (2009) found SSP and independent school students to have similar results in an examination of their physical self-perceptions. The authors of these studies attributed the positive outcome for the

independent school students to be a benefit of their higher SES; whereas for the SSP students, the outcome was attributed to the program. It was thought that without the program, the SSP students would not have had access to as many positive sporting opportunities as the independent school students. Future research should therefore differentiate between school contexts to determine the influence of participation for different demographics.

Interestingly, for studies examining the influence of participation in a Specialist *Sport* Program, half of the studies included did not state the sport played by the students. Light and Kirk's (2000) study highlighted the potential downside of participation in an SSP and explained the influence that the type of sport played can have on the development of such a negative culture. Further research examining SSPs should therefore specify the sport played by the students so that this can be taken into consideration. Additionally, it is recommended that multiple SSPs specialising in a variety of sports be examined together to potentially negate this issue.

There was a fairly even balance of quantitative and qualitative studies. However, only four of the 10 studies included in the review were longitudinal, and two of these studies did not follow the same students over time to measure progression, rather they analysed the final exam results of different cohorts of students over time. As research examining SSPs is still in its infancy, further research should continue to use both quantitative and qualitative methodologies in order to gain a clearer picture of the influence of participation in an SSP. It is also recommended that more longitudinal studies are conducted to determine the long-term influence of the program and whether students' outcomes improve, decline, or remain stable.

### **Influence of SSP on Adolescents' Educational Outcomes**

Of the 10 studies reviewed, only two examined the influence of SSPs on adolescents' educational outcomes. SSPs were found to have a positive influence on academic



performance (Levačić & Jenkins, 2006; Taylor, 2007), however this finding is based on analysis of a national dataset rather than individual-level data. Both Levačić and Jenkins (2006) and Taylor (2007) highlight the need to be cautious when interpreting the results of secondary data analysis due to the “probable omission of potentially important but unobservable variables” (Taylor, 2007, p. 466). As such, Taylor recommends further exploration in order to determine why SSPs influence adolescents’ academic performance.

One possible explanation for the influence of SSPs on adolescents’ academic performance is that adolescents involved in the SSP have higher levels of engagement with school through the program. Chen and Ennis (2009) have previously suggested that the normal classroom environment can stifle an adolescents’ desire to learn. Taylor (2007) suggested that the classes on offer at schools with SSPs are a better match for the interests of student-athletes than traditional academic classes. Students’ engagement with school through the SSP may explain the improved academic performance at schools with SSPs, as greater school engagement has previously been associated with greater academic achievement (Park, Holloway, Arendtsz, Bempechat, & Li, 2012).

### **Influence of SSP on Adolescents’ Psychosocial Outcomes**

In contrast to the results surrounding adolescents’ educational outcomes, the influence of participation in an SSP on adolescents’ psychosocial outcomes was more complex. One reason for this is because there was a variety of psychosocial outcomes across the 10 studies reviewed. The SSPs were found to have the potential to positively influence some psychosocial outcomes, however other studies showed the potential for the SSP to negatively impact adolescents’ psychosocial outcomes.

### **The positive influence of SSPs.**

One study (Graham, MacFayden, & Richards, 2012) clearly demonstrated the positive influence of participation on the well-being of adolescents participating in an SSP. That is, students participating in an SSP were found to be more enthusiastic about being identified as highly-able, than students participating in other specialist programs (Graham, MacFayden, & Richards, 2012). This result was not surprising as physical education is a popular subject that students view as being fun and enjoyable due to the social aspects of the activities (Bailey & Dismore, 2004; Dyson, 2006; Fairclough, 2003; Smith & Parr, 2007). Due to the similarities between physical education and SSPs, it is likely that students would feel good about their talent in this area.

Two studies (Jones, Polman, & Peters, 2009; Marsh, Morin, & Parker, 2015) investigating students' physical self-perceptions also demonstrated the positive influence of participation in an SSP. However, the results were more nuanced.

Jones, Polman, and Peters' (2009) study revealed gender differences. That is, there were significant differences between male students' physical self-perceptions based on the type of school they attended (SSP or no SSP), that did not exist for female students. This result suggests the positive influence of SSPs on adolescents' physical self-perceptions exists only for male students.

Marsh, Morin, and Parker's (2015) study showed that the difference in physical self-perceptions between specialist and non-specialist students was only significant in the first year of secondary school. Over time, the physical self-perceptions of specialist students declined, suggesting that the positive influence of SSPs on adolescents' physical self-perceptions exists only in early adolescence.

When examined together, the results of these two studies (Jones, Polman, & Peters, 2009; Marsh, Morin, & Parker, 2015) suggest that participation in an SSP is associated with more positive physical self-perceptions, but only for early adolescent, male students. However, confidence in this conclusion is tempered by the fact that only two studies examined the influence of participation in an SSP on adolescents' physical self-perceptions.

### **The negative influence of SSPs.**

In contrast to the positive influences outlined above, one study demonstrated the negative influence of participation in an SSP. Light and Kirk (2000) revealed a culture of hyper-masculinity within an SSP at an all-boys school in Australia. Many of the behaviours associated with hyper-masculinity, such as the bullying of younger students, were perceived by the specialist students to be essential for learning to become "a man."

According to Connell (1983) different sports elicit different types of masculinity depending on the combination of power and skill required. For example, badminton would require a more tactical knowledge and skill, whereas rugby (the sport played in Light and Kirk's study) involves a physical power and force that is exerted directly onto the opponent's body. This would suggest that the development of hyper-masculine behaviours in a specialist rugby program is more probable than in a specialist program focusing on a different sport.

As these studies have shown, SSPs can have a significant influence on adolescents' developmental outcomes. At times, this influence is positive, other times it is negative. Two studies included in this review examined the elements of the SSP that participants perceived to be influential in facilitating positive developmental outcomes for the students involved.

### **The Influential Elements of an SSP**

Two studies (Camiré, Trudel, & Bernard, 2013; Olushola, Jones, Dixon, & Green, 2013) included in the current review conducted a case study to identify the elements of an

SSP that were influential in fostering positive developmental outcomes in adolescents. The elements identified were: the design of the program, the promotion of values through the program, and the teachers' ability to foster positive relationships with their students (Camiré, Trudel, & Bernard, 2013; Olushola, Jones, Dixon, & Green, 2013). Previous studies of sport programs also identified these elements as being influential. For example, the use of developmentally appropriate designs was recommended by Fraser-Thomas, Cote, and Deakin (2005), while the facilitation of positive relationships and social interactions were prescribed by Collins, Gould, Lauer, and Chung (2009), and Biddle and Asare (2011). Due to the different educational systems in which SSPs are embedded, further investigations of SSPs in different school systems around the world is warranted in order to determine those elements of the program that have a universal positive influence and those that do not.

### **Critical Reflection of the Research Designs Used by the Included Studies**

The results outlined above must be interpreted with caution for a number of reasons. First, SSPs are a voluntary activity in which students elect to participate. As such, all of the studies included in this review lacked randomisation of participants, and, as a consequence, the studies may have suffered selection bias. That is, in the studies that demonstrated the positive influence of SSPs, it might be that students with more positive developmental outcomes were more likely to be selected to participate in SSPs, rather than it being the participation in the SSP that elicited the positive developmental outcomes. Equally, in the study that demonstrated the potential negative influence of SSPs, it might be that students with antisocial tendencies were more likely to enrol in a rugby program in order to act out their feelings, rather than it being the SSP that encouraged such hyper-masculinity. Alternatively, it could have been the culture of the all-boys school that was involved in the study; such hyper-masculinity may not be as pronounced at a coeducational school.

Second, the majority of studies included in the current review did not consider the influence of other possible factors on the students' developmental outcomes. For example, the students' involvement in other activities besides the SSP, or the general quality of the school that hosted the SSP. As Taylor (2007) explained, the positive influence of the SSP, with regard to a schools' academic performance in the GCSE, may be related to the additional funding the school receives from the government for the program.

Third, the majority of articles did not consider the influence of contextual factors such as the SES of the school involved. That is, the findings of several studies included in the review indicated that SES may have moderated the association between participation in an SSP and adolescents' developmental outcomes. However, the majority of studies included in the review only recruited students from elite, private secondary schools, predominantly catering for adolescents from higher SES neighbourhoods.

### **Strengths, Limitations, and Recommendations**

This study is the first to systematically review the influence of participation in an SSP on adolescents' developmental outcomes. This review only included peer-reviewed papers and all of the studies included were of a high quality. Albeit subject to the limitations identified below, the evidence regarding the influence of participation in an SSP, presented in this review is strong.

The results of this review are important as they can be used by teachers to design SSPs in such a way as to maximise the potential positive influence of the program, or to demonstrate the importance of SSPs for adolescents' development and counterbalance the claims that school sporting programs have a negative impact upon the educational outcomes of students by taking time away from their academic studies.

Despite the strengths of this review, there are limitations of this study that also must be acknowledged. First, a meta-analysis was not possible due to the small number of studies included in the review and the wide variety of outcomes examined. Had it been possible, a meta-analysis would have provided a more powerful and precise estimate of the influence of participation in an SSP (Stone & Rosopa, 2017). Second, limiting the study to articles published in English potentially limited the number of papers available for review; there may have been studies examining the influence of participation in an SSP conducted in non-English speaking countries.

The current review reveals a lack of research conducted on SSPs, with only 10 studies examining the influence of such programs on adolescents' development. Further research examining SSPs is therefore important.

With regards to research examining students' educational outcomes in relation to SSP participation, the following recommendations are made. First, the academic performance of students participating in SSPs in countries other than the U.K. should be investigated so as to confirm the generalisability of Levačić and Jenkins (2006) and Taylor's (2007) results. Second, further research should also examine student-level (rather than school-level) data and follow the students throughout secondary school in order to determine the long-term impact of participation in an SSP on students' academic performance. Third, students' level of engagement with school should be examined in order to determine if this is a contributing factor.

With regards to research examining students' psychosocial development, further research is also required to clarify and confirm the influence of participation in an SSP. Based on the findings of the studies included in this review, the following recommendations are made. In order to extend our understanding of the positive influence of participation in an

SSP, research examining students' general life satisfaction is recommended. Additionally, as Olushola et al.'s (2013) study suggested that SSPs could meet some of the needs of low SES students that their family could not, it is also recommended that researchers examine students' basic psychological needs satisfaction in relation to their participation in an SSP. It is also recommended that researchers continue to examine students' physical self-perceptions in relation to their participation in an SSP, due to the physical nature of the SSP and adolescence being a crucial time for identity development. Finally, due to the findings of Light and Kirk's (2000) study, an investigation of students' social competence in relation to their participation in an SSP is also recommended.

### **Conclusion**

The aim of this review was to collate and evaluate the existing research on SSPs to determine if participation in these programs influences the developmental outcomes of the adolescents involved. The studies included in this review demonstrated that SSPs have the potential to positively influence adolescent outcomes. However, this positive influence appears to be dependent on certain elements such as the design of the program, the promotion of values through the program, and the teachers' ability to foster positive relationships with and between their students. Although research linking SSPs to adolescents' developmental outcomes is in its infancy, the overall finding from this review is that despite having some downsides in certain situations, SSPs can help students to enhance their skills and specialise in the sport of their choice, and provide adolescents with a positive context through which to develop. It is important that future research specifically focus on the influence of participation in an SSP for low SES adolescents as Olushola et al.'s (2013) study indicated that SSPs could meet some of the needs of low SES students that their family could not.

## **Preface to Study 2**

The overall aim of this thesis was to increase our understanding of the influence of participation in an SSP for adolescents attending schools in low SES areas of W.A. The first study of this thesis, a systematic review, was conducted to determine what was already known about the influence of participation in an SSP on adolescents' developmental outcomes.

Relative to the amount of research that has been conducted, a wide range of variables have been examined in relation to students' participation in an SSP. The review demonstrated that SSPs can influence adolescents' developmental outcomes and that SES may influence the association between participation in an SSP and students' developmental outcomes. However, there is a lack of qualitative research examining the influence of participation in an SSP and a lack of research conducted in low SES areas. Additionally, the systematic review only identified two studies that were conducted in Australia—both of which recruited students from schools located in economically advantaged areas.

It is important to address this lack of research, because every country has a different educational system within which the SSPs are embedded; consequently, the influence of the program on adolescents' developmental outcomes could differ between countries. Therefore, the purpose of Study 2 was to explore the perceptions of students, teachers, parents, and graduates of SSPs regarding the impact of participation in an SSP for students attending secondary schools located in low SES areas of W.A.



## **Study 2**

### **Influence of Specialist Sport Programs (SSPs) in Low SES Areas of Western Australia:**

#### **A Qualitative Exploration**

Adolescents growing up in low socio-economic status (SES) areas experience more negative psychosocial and educational outcomes than adolescents living in higher SES areas. Some of the negative psychosocial outcomes reported by adolescents in low SES areas include lower levels of life satisfaction (Ash & Huebner, 2001; Seligson, Huebner, & Valois, 2003) and a higher risk of behaviour problems (Menrath et al., 2012). Furthermore, in comparison to Australian adolescents living in high SES areas, adolescents living in low SES areas of Australia had the highest rates of mental disorders, specifically major depressive disorder (Lawrence et al., 2015).

With regards to their educational outcomes, Australian secondary school students from low SES backgrounds tend to have lower levels of attendance at school (Hancock, Shepard, Lawrence, & Zubrick, 2013), academic achievement that is below the minimum national standard (ABS, 2011), and lower rates of secondary school completion (Lamb, Jackson, Walstab, & Huo, 2015) in comparison to their higher SES peers. Furthermore, students from low SES backgrounds are less likely than students from higher SES backgrounds to enrol, and succeed, in post-secondary education and training (Black & Walsh, 2009).

Schools are an important context for the promotion of positive psychosocial and educational outcomes for adolescents. According to Parkville Global Advisory (2014), increasing student engagement with school is an essential element for overcoming the educational disadvantage adolescents face due to their low SES. Although all schools aim to facilitate adolescent development, school structures can stifle an adolescents' intrinsic desire

to learn (Ryan & Deci, 2009), so educators need to find ways for students to meaningfully engage with the curriculum (Chen & Ennis, 2009). Specialist Sport Programs (SSPs) may be one way of increasing the school engagement levels of students who enjoy sport.

SSPs are offered around Australia, in the United Kingdom, and in several other Western countries including the United States of America and France. These programs integrate education and sport development within a mainstream secondary school (Radtke & Coalter, 2007). The resultant integration of specialist students with their non-participating peers is thought to be essential for the specialist students' social and emotional development (Radtke & Coalter, 2007).

SSPs generally follow the format of a typical physical education curriculum, however the students involved in the SSPs specialise in one particular sport for the duration of their secondary education (Radtke & Coalter, 2007). SSPs also include several additional elements such as regular games after school hours, and excursions, camps, and tournaments at state, national, and international levels. While the principle aim of SSPs appears to be the development of the psychomotor, tactical, and physiological capabilities of the students in their sport of choice, the focus of SSPs can be broader than these outcomes (Gross & Murphy, 1990; Harriss & Cibich, 1999).

A systematic review of the influence of SSPs on adolescent development (i.e., Study 1) identified only 10 studies that had previously examined the influence of SSPs. Two studies included in the review (Levačić & Jenkins, 2006; Taylor, 2007) examined the influence of participation in an SSP on academic performance, six studies (Graham, McFayden, & Richards, 2012; Jones, Polamn, & Peters, 2009; Laurin & Nicolas, 2009; Light & Kirk, 2000; Marsh, Morin, & Parker, 2015; Sagar, Lavallee, & Spray, 2007) examined the influence of participation on students' psychosocial development, and two studies (Camiré, Trudel, &

Bernard, 2013; Olushola, Jones, Dixon, & Green, 2013) explored the elements of SSPs that were perceived to be influential in fostering positive developmental outcomes for the students involved. The studies included in the review demonstrated that SSPs can positively influence students' educational outcomes, however, the influence of participation in an SSP on adolescents' psychosocial outcomes was more complex. The development of positive outcomes appears to be dependent on certain elements such as the design of the program, the promotion of values through the program, and the teachers' ability to foster positive relationships with and between their students (Camiré, Trudel, & Bernard, 2013; Olushola, Jones, Dixon, & Green, 2013).

While the findings of the studies included in this systematic review (i.e., Study 1) point to the potential for SSPs to positively influence the educational and psychosocial development of students, most of the studies included in the review were conducted with students attending elite, independent schools that predominantly cater for adolescents from higher SES backgrounds.

The study by Olushola, Jones, Dixon, and Green (2013) was the only research included in the review that was specifically conducted in a low SES area. However, two other studies included in the review point to the potential influence of SES in relation to specialist students' developmental outcomes. Jones, Polman, and Peters (2009) found that both independent school students and SSP students scored significantly higher than their counterparts attending government schools without SSPs on a measure of physical self-perceptions. Jones et al. (2009) attributed the positive outcome for the independent school students to be a benefit of their higher SES; whereas for the SSP students, the positive outcome was attributed to their involvement in the program. Similarly, Taylor (2007) observed a difference in adolescents' academic performance with regard to their participation in an SSP and the school's location. Specifically, Taylor (2007) found the academic

performance of schools with a higher percentage of low SES students improved more over time than the schools with a lower percentage of low SES students.

Although the results of Study 1 suggest that participation in an SSP can have a positive influence on the developmental outcomes of the students involved, there has been very little research conducted in Australia, none of which has been conducted with students from low SES backgrounds. Additionally, the quantitative studies that have examined the influence of participation in an SSP on adolescents' developmental outcomes chose one particular educational or psychosocial outcome to examine, based on the researchers' pre-existing knowledge of adolescent development and the influence of sport. That is, existing quantitative studies of SSPs identified an outcome considered important during adolescence (e.g., academic performance or physical self-perceptions) and examined it in relation to the students' participation in the program, rather than exploring what outcomes were perceived to be influenced by the students' involvement in the program. Consequently, there is a lack of qualitative research examining the breadth of influence that participation in an SSP can have on the students involved.

The purpose of this investigation was to explore the perceptions of the specialist students, their parents, as well as teachers and graduates of the SSPs, regarding the impact of participation in SSPs for students attending schools located in low SES areas of Western Australia (W.A.). The perspectives of these key stakeholders are important in understanding the breadth of impact that participation in SSPs can have on adolescents' development.

## **Method**

Interpretative Phenomenological Analysis (IPA) was used because the current study sought to examine the perceptions of several key stakeholders of the SSPs. IPA involves a double hermeneutic process; the participant first makes sense of the experience and then the

researcher makes sense of the participants' perceptions (Smith, Flowers, & Larkin, 2009).

IPA is also an inductive and idiographic approach. That is, during IPA, the researcher looks for patterns and themes from the raw data from which to develop a general theory of the phenomenon being investigated (Smith et al., 2009). IPA takes into consideration the perspectives of the individuals involved in the experience.

## **Sampling**

Purposive sampling was used to target schools offering an SSP located in a low SES area of W.A. Schools that offer SSPs were identified through the W.A. Department of Education's webpage. Schools were defined as low SES if their rating on the Index of Community Socio-Educational Advantage (ICSEA) was below the median. The ICSEA uses a compilation of information such as the students' home address, their parents' level of education, occupation, and income, and the school's location to provide each school with a number on a scale (ACARA, 2013). For the purpose of the current study, it was assumed that students attending schools in low SES areas would come from a low SES background. Of the 32 schools in W.A. with an SSP, 15 were found to be in low SES areas.

## **Participants**

Descriptive information relating to the 22 key stakeholders involved in the current study is presented in Table 3. To be eligible to participate in this study, the participants had to meet the following criteria:

- The students must be currently involved in the SSP
- The parents must have a child who is currently involved in the SSP
- The teachers must have at least 1 year of experience as an SSP teacher, and
- The graduates of the SSP must have participated in the SSP for at least a year and completed their schooling at least a year prior to the interview.

These criteria were used to ensure the participants involved in the interviews had sufficient experience with the SSP to provide an in-depth perspective of the impact of participation in SSPs.

## **Materials and Procedure**

After receiving approval from the Edith Cowan University Human Research Ethics Committee and the W.A. Department of Education, invitations to participate in the study were sent to the principals of the 15 schools with SSPs that were identified as being in a low SES area of W.A. Six schools chose to be involved in the current study. School teachers assisted with the distribution of the information letters and consent forms.

Once consent had been received, a suitable time for the student and teacher interviews was negotiated with each school. Interviews were conducted in the office of the school's sports department. One-on-one interviews were conducted with the male students. Only one school included in the current study had female students participate in the study. Due to the demands imposed by this school, these students were interviewed together as a focus group. Interviews with the graduates and parents were conducted off-campus at either a local café or library meeting room. All interviews lasted between 20 and 60 minutes.

A semi-structured format was used for all interviews. Such a format allowed the participants to discuss what they felt was important regarding the benefits and challenges associated with participation. The interview included comparative, contrast, descriptive, evaluative, and structural questions, as well as probes and prompts (Smith, Flowers, & Larkin, 2009). For example, the participants were asked "Can you tell me about the SSP you are involved in?" and "Can you list all the benefits of being involved in the SSP?". As the purpose of this study was to explore the breadth of impact that participation in an SSP can

have on adolescent developmental outcomes it was important to keep the interview questions open.

Table 3

*The Number of Participants (and their Gender) from Each School*

School	Students	Graduates	Teachers	Parents
1			1(m)	
2	4(f)	1(m)	1(f)	
3	3(m)		1(m)	1(m) & 2(f)
4	4(m)		1(m)	
5		1(m)	1(f)	
6		1(m)		

Note: f = female, m = male

### **Data Analysis**

Interviews were audio recorded and then transcribed. Once transcribed, the author read through the interviews while listening to the recordings to ensure the accuracy of the transcriptions. NVivo qualitative data analysis software (Version 10) was used to organise and analyse the data. Data were de-identified to ensure confidentiality and each participant was assigned a code. Male students were assigned the letters MS and female students the letters FS. Graduates were assigned the letter G; teachers, the letter T; and parents, the letter P. Each participant was then assigned a number. For example, the first male student interviewed was coded MS1.

The guidelines for analysing data using the IPA framework are flexible and can be adapted depending on the objective of the investigation (Pietkiewicz & Smith, 2014). Three

general steps of IPA used in the current study were: multiple reading and making notes, transforming notes into emerging themes, and seeking relationships and clustering themes.

There are four broad criteria used to determine the validity and quality of qualitative research and the current study attempted to meet each of them. The criteria are: sensitivity to context (includes the use of relevant literature and participants' perspectives), commitment and rigour (includes methodological competence and skill), transparency and coherence (e.g., Is there a good fit between the theory and method used? Are the methods and data presentation transparent?), and impact and importance (Does the research enrich our theoretical understanding and does it have a practical impact?) (Yardley, 2000). As a professional courtesy, interview transcripts were sent to participants (via email) to check if they would like to make any amendments.

## **Results and Discussion**

Analysis of the interviews revealed the positive influence of participation in an SSP for adolescents attending schools located in low SES areas of W.A. The positive influence included: the facilitation of students' engagement with school and the development of students' life skills. The analysis of the interview data also revealed both individual- and program-level factors underpinning the positive influence of the SSP. Individual-level factors included: the student (and SSP teachers') intrinsic interest in sport and the personal qualities of the SSP teacher; while program-level factors included: the amount of time spent participating in the program and the code of conduct implemented as part of the program. The development of positive relationships (both between students and between the students and their SSP teachers) were perceived to be both a positive outcome associated with participation in an SSP and a factor underpinning the positive influence of SSPs.



## **The Positive Influence of SSPs**

All participants reported that participation in the program had a positive influence on the students involved. Participation in an SSP was perceived to have a positive influence on students' engagement with school and their life skill development. To my knowledge, life skills were not explicitly taught as part of the SSPs involved in the study. Consequently, it is thought that the students' engagement with school through the SSPs facilitated the development of their life skills.

### **Facilitation of student–school engagement.**

There are three types of engagement relevant to an examination of students' engagement with school: behavioural, cognitive, and emotional (Fredricks, Blumenfeld, & Paris, 2004). Behavioural engagement refers to students applying effort to their education (Sciarra & Seirup, 2008); cognitive engagement refers to students applying effort to their education because they want to, not because they feel obliged to (Sciarra & Seirup, 2008); and emotional engagement refers to the affective reactions students have to their teachers, peers, and the school in general (Fredricks et al., 2004). All three types of engagement were alluded to by the participants in the current study.

The SSP students' behavioural engagement was demonstrated through their compliance with the code of conduct; a prerequisite for them to remain in the program. The code of conduct outlined the teacher's expectations for the specialist students. While some schools had specific requirements for the students, such as a minimum 90% attendance rate at school and maintenance of "acceptable" grades in all subjects, other schools provided more general guidelines outlining what was expected of students in the SSP. For example, the code of conduct attached in Appendix L states that students should "be punctual, prepared for and

well presented for all classes” and “work responsibly and diligently on all activities” in school.

With regards to attendance, Participant T3 explained:

[SSPs] definitely increase the attendance of the kids ... if we have it [the SSP] Period 1 [the start of the school day] and Period 5 [the end of the school day], they're [the SSP students] attending throughout the whole day.

T3 said that this structure accounted for an improvement in students' attendance in other classes as they could not be bothered to leave school in between their SSP classes. P2 concurred, “there are a lot of kids that the only reason they're still at school is because of the program—it gives them a reason to go [to school].” With regards to their behaviour and academic achievement, MS1 explained: “I'm focused on not getting into trouble, so I won't miss any games,” while MS3 said he made more of an effort with his academic studies so as to remain in the program:

It made me think, it's going to affect your appearance in the program ... it's made me think harder in maths and like ... English and stuff like that so ... I moved up from a C to a B in English from thinking about the program, and if I didn't think about the program, I would still have been on a C kind of thing.

As well as being behaviourally engaged with their school, the SSP students were also cognitively engaged with their education. This was apparent when the students applied effort to their education because they wanted to, not because they felt they should (Sciarra & Seirup, 2008). Although it is difficult to observe cognitive engagement among students in compulsory education, this form of engagement was evident in the statements made by the teachers. For example, T2 spoke of past students who went on to tertiary level study despite it being optional: “I've kept in touch with a lot of students ... saying you know ‘now I'm at university doing teaching’ or ‘I've finished a masters in something else.’”

The SSP students also appeared to be emotionally engaged with their school through the SSP. This emotional engagement was evident in the positive feelings the students discussed in relation to their participation in the program and the positive relationships that they reported were developed through the program. All of the SSP students said that the program was their favourite subject at school. For example, MS5 explained that participating in the SSP was “fun ... it’s energetic and you just have a great time doing it.” The students’ positive views were echoed by the parents, with P2 saying “[my son] really enjoyed it [the SSP] and it was a good outlet for all of his energy.” The enjoyment experienced through the SSP improved the students’ feelings about school in general. For example, MS7 said: “I didn’t want to come to [school] unless I got into the [SSP]”; and G3 said that attending school was “the best 5 years of my life.”

It was apparent that participation in the SSPs helped to promote the students’ behavioural, cognitive, and emotional engagement, with their school. Both male and female students felt that participation in SSPs positively influenced their engagement with school. However, only male students discussed specific aspects relating to engagement, such as attendance, behaviour, and academic achievement. This is a significant finding as previous research that has demonstrated gender differences in school engagement levels has found that girls were more engaged with school than boys (Dotterer, McHale, & Crouter, 2007). The graduates, teachers, and parents also discussed these aspects of engagement.

The improved outcomes of attendance, behaviour, and academic achievement for students in an SSP in a low SES area is an important finding, because students from low SES backgrounds have previously been found to have lower rates of school attendance (Hancock, Shepherd, Lawrence, & Zubrick, 2013) and their academic achievement is below the minimum national standard (ABS, 2011). These improved outcomes increase the students’ likelihood of completing secondary school and continuing into further education, which is an

important step towards breaking the cycle of disadvantage that currently exists for students from low SES backgrounds (Department of Education and Training, 2018).

### **The development of life skills.**

Participants reported that SSPs promoted the development of adolescents' life skills. For example, T3 stated:

The way we look at the program is, we want to give them a [sport] education, an academic education, and a life education ... so that when they leave [school], they're actually good people ... getting them involved in doing good things and making good choices.

Some of the life skills that participants described included: interpersonal skills, self-management skills, responsibility, and work ethic.

With regards to interpersonal skills, MS1 said: "it [the SSP] improves your leadership ... it improves like your communication and like working well with others." FS2 also exemplified these skills when she explained how she encourages her team to welcome and support new players:

As a captain, if there's a new girl who comes in ... I always say to the girls, "I want a happy game." That attitude, and "support each other" because, during a game and you're new ... I would hate to feel like "Am I doing this right or wrong?" that's a bad feeling.

With regards to self-management skills and responsibility, students learned time management skills and to prioritise their academic work. For example, MS5 said: "I get my [home]work done first, so I don't have to worry about it." He explained that by prioritising his school work and completing it first, he had free time to do as he pleases. As G2 said, "It [the SSP] made me grow up." By this, G2 meant that he learned how to take responsibility for himself and realise what was important for his future success.

The development of students' work ethic was also cited as a benefit of participation in the SSP. P3's child had moved school to be in the SSP, and, when asked about the benefits of participation, P3 said he loved the work ethic that was promoted for the students involved in the program. It is thought that P3 could see how this would benefit his son in the long term—when he had completed school and was pursuing a career.

The development of life skills through the SSPs is an important finding because life skills' development has been associated with success outside of the sporting environment (Danish, Forneris, & Wallace, 2005). The current study extends the findings of Camiré, Trudel, and Bernard (2013), who demonstrated that the strength of an SSP in Canada lay in its ability to teach life skills to the adolescents involved. While Camiré et al.'s (2013) investigation only included one school where the SSP was specifically designed to teach life skills, the current study provides evidence that SSPs can facilitate the development of life skills even if they are not explicitly taught. Furthermore, although previous research has found sport to have the potential to facilitate life skills' development, very little research has examined whether these life skills are transferred to adolescents' lives beyond sport (Gould & Carson, 2008). For the students involved in the SSPs in the current study, these life skills were perceived by them to be transferred from sport to their academic life.

### **Factors Underpinning the Positive Influence of the SSPs**

The interviews identified several factors that underpin the positive influence of the SSP on the adolescents involved. At an individual level, the SSP teacher and students' intrinsic interest in sport is an important factor; as are the personal qualities of the SSP teacher. At the program level, the amount of time spent in the program and the implementation of a code of conduct are important factors.

### **SSP teacher and students' intrinsic interest in sport.**

Students involved in the SSP were intrinsically interested in sport. All of the students and graduates agreed that the SSP was their favourite subject or activity at school. The teachers explained that without this intrinsic interest, the students would soon drop out of the program. T1 referred to the students' intrinsic interest in the SSP as a "common passion."

SSP teachers were also perceived to be intrinsically interested in sport because of their choice to specialise and teach this subject. Additionally, many of the SSP teachers mentioned that they either currently or formerly played their sport of choice (often at an elite level) with community clubs outside of school time.

### **Personal qualities of the SSP teacher.**

The personal qualities of the SSP teacher were also perceived by the participants to be an important influence on the facilitation of positive developmental outcomes for the students involved. It was obvious from the way the students spoke that they held their SSP teacher in high regard. The students described their SSP teachers as: "supportive ... nice ... and understanding" (FS1), and "really easy to talk to" (FS3). The students also spoke of how their teacher cared for all aspects of their life and development: "It's not only about [sport]; they'll help us in other subjects too" (FS2). For example, T5 explained that:

[SSP teachers] provide as much support as we can outside of what we teach in the SSP. So, if we see that kids are struggling in classes, we do offer them some help because they are in our specialist program.

The graduates recalled how their SSP teachers provided them with valuable study and career pathway advice, and, in so doing, the SSP teachers acted as mentors for the students. It is thought that the personal qualities of the SSP teachers played an integral part in the students' continued participation in the SSP and in the development of positive outcomes.

### **Amount of time spent in the SSP.**

Because the students were intrinsically interested in sport, they were happy to dedicate a large amount of time to their participation in the program, and that dedicated time is necessary for the facilitation of positive relationships as well as the development of the students' sport skills. T3 explained that the SSP teachers often have a more positive relationship with their students than other teachers do "just from having that rapport with the kids for those 6 hours a week."

### **Code of conduct.**

The code of conduct emphasised the teachers' expectations for the students involved in the SSP. Every student knew they had to attend school, maintain good standing, and put effort into achieving the best grade they could in every subject, not just the SSP. As MS3 explained: "cos I'm in the [sport] program, they like expect good kind of things so I don't muck up in classes or anything." By complying with this code of conduct, the students were demonstrating their behavioural engagement.

The opportunities provided through the program acted as a lure to encourage students to follow the code of conduct. T3 said: "It [the SSP] is very much an incentive-based approach for them. If they want to be here, then they've got to do the right thing." T2 described how school life was different for the students involved in the specialist programs and indicates how teachers perceived these opportunities to be a mechanism to facilitate the students' engagement with school:

I think the opportunities they had were significantly more—you could almost go through high school and not leave campus ... and just chalk and talk with the teacher ... and I'm not sure that's so engaging and motivating and gives that sense of belonging and ownership ... I'm not sure students who weren't involved in specialist programs had those experiences.

## **Positive Relationships Developed Through the SSPs**

The development of positive relationships between the students, as well as between the students and teachers, was discussed by participants as a positive influence of the program. When asked about the benefit of participating in the SSP, FS4 said: “meeting new people ... you make friends with everyone on your whole team.”

The relationship students had with their SSP teacher was much more beneficial than what would otherwise be experienced between students and their teacher. T3 explained: “Our relationship with the kids can be very different from other teachers.” Similarly, the students and graduates felt that the friendships formed through the SSP were stronger than those that would normally develop at school. MS2 explained: “You get to know each other as a team sort of thing, cos you can know someone just as a person but if you’re in a team it’s different ... [The team environment] makes you closer.” Additionally, G2 described how the team bond lasted even after they had all finished secondary school:

The bond you have with everyone, just kind of stuck around ... and there’s still people that we play ... with now that you never break that bond with. So, you’re all still friends and that’s probably one of the best parts about it.

It is thought that the development of positive relationships through the SSP is also a factor underpinning the positive influence of SSPs. Participants reported that the positive relationships developed through the SSP provided students with additional benefits such as a support network. This was exemplified by P1 who said, “I think coming into a new area ... not knowing anyone and having that [sport] program has created a little group of people that he can relate to.” Both male and female students discussed the development of positive relationships as a benefit of the SSPs. Graduates, teachers, and parents all concurred on this benefit.



The development of positive relationships with peers and teachers satisfies the students' basic psychological need for relatedness, which is important because satisfaction of this need has previously been associated with students' internalisation of teachers' values. It is thought that the code of conduct demonstrated the value that the SSP teachers place on the specialist students' education and that the specialist students internalised this value because of their close relationship. As a consequence, students were motivated to achieve academically for their own sake, not simply because of the presence of a code. The positive relationships developed through the SSP can therefore also be considered a factor underpinning the success of the program.

The development of positive relationships between the students, as well as between the teachers and students, was also discussed in the interviews as a way of facilitating engagement. T2 explained how she felt that the relationships developed through the SSPs connected the students to their school: "The camaraderie [developed between students] ... the connection that they had, they felt connected to school as well." These positive relationships facilitated the students' connection to their school.

### **Conclusion**

The purpose of this investigation was to explore the impact of participation in SSPs for students attending schools located in low SES areas of W.A., in order to address the scarcity of research on SSPs, especially in Australia and in low SES areas. Analysis of interviews conducted with students, parents, teachers, and graduates indicated that SSPs promoted the development of the students' life skills and positively influenced the students' engagement with school. The elements of the SSPs that are thought to be influential in delivering these positive outcomes for the adolescents are: the specialist students' intrinsic interest in sport, the amount of time spent in the SSP, the code of conduct implemented, the

opportunities provided to specialist students through the program, and the personal qualities of the SSP teachers. The development of positive relationships between the students, as well as between the students and teachers, was also discussed as a way of facilitating specialist students' engagement with school. Overall, the findings of the present study point to the positive influence participation in an SSP can have for adolescents attending schools located in low SES areas.

### **Preface to Study 3**

The aim of this thesis was to increase understanding of the influence of participation in an SSP on adolescents attending schools in low SES areas of W.A. While Study 1 demonstrated that SSPs have the potential to positively influence adolescents' developmental outcomes, Study 2 found participation in an SSP was perceived to positively influence the development of life skills and facilitate the school engagement of students attending schools located in low SES areas. The elements of an SSP that were perceived to make the program influential were also identified.

Despite the positive findings thus far, it is important to note that qualitative research is often criticised for its small sample sizes and lack of generalisability of observations (Castro, Kellison, Boyd, & Kopak, 2010). To overcome this issue and strengthen the knowledge base of the influence of participation in an SSP, quantitative studies were also conducted. The following two studies use quantitative methods to determine the influence of SSPs on adolescent's psychosocial (Study 3) and educational (Study 4) outcomes.

### **Study 3**

#### **Psychosocial Development of Adolescents Participating in Specialist Sport Programs (SSPs) in Low SES Areas of Western Australia**

Psychosocial development pertains to the interrelation of an individual's psychological development and their social environment (Vizzotto, deOliveira, Elkis, Corderio, & Buchaain, 2020). The psychosocial tasks of adolescence relate to the development of one's identity and life skills, as well as the facilitation of well-being. Failure to construct a strong identity can lead to poor self-esteem and has previously been associated with depression and underachievement at school (Sanders, 2013), whereas the success of an individuals' transition into adulthood is dependent on the acquisition of life skills that can be transferred from school to work. When people experience high levels of well-being they are said to be flourishing (Keyes, 2002; Tov, 2018), and it has been suggested that this flourishing can strengthen an individual's resilience in times of adversity (Diener et al., 2010; Su, Tay & Diener, 2014).

The attainment of healthy developmental outcomes during adolescence is critical for a successful transition to adulthood (Blum, Astone, Decker, & Mouli, 2014; Fraser-Thomas & Cote, 2009). A basic proposition underlying most theories of human development is that development is a complex process of interactions both within the individual and between the individual and their environment, over time (Mahoney, Lowe, Vandell, Simpkins, & Zarrett, 2009). Contextual factors can have either a positive, negative, or protective influence on adolescents' development. Some of the most influential contextual factors with regards to adolescents' psychosocial development are socio-economic status (SES), schools, and recreational activities (such as sporting programs; Goodman, Huang, Schafer-Kalkhoff, & Adler, 2007; Leventhal, Dupéré, & Brooks-Gunn, 2009).

Lower levels of socio-economic status have been found to have a detrimental effect on adolescents' outcomes (Goodman, Huang, Schafer-Kalkhoff, & Adler, 2007). Many studies have demonstrated that in comparison to their higher SES peers, low SES adolescents are at an increased risk of mental health problems—such as low self-esteem, lower levels of life satisfaction, depressive symptoms, difficult peer relations—and a higher risk of behaviour problems, including criminal and delinquent behaviour (Ash & Huebner, 2001; Goodman, Slap, & Huang, 2003; Leventhal, Dupéré, & Brooks-Gunn, 2009; McLoyd et al., 2009; Menrath et al., 2012; Seligson, Huebner, & Valois, 2003). Accordingly, adolescents from low SES backgrounds are considered to be more vulnerable than their higher SES peers (Totten, 2007).

In comparison, participation in sport has been found to have a positive influence on adolescent outcomes, including a positive association with adolescents' physical self-concept, life satisfaction, social competence, and total resilience score (Babic et al., 2014; Brunelle, Danish, & Forneris, 2007; Hjemdal, Friborg, Stiles, Martinussen, & Rosenvinge, 2006; Ullrich-French, McDonough, & Smith, 2012; Vilhjalmsson & Thorlindsson, 1992). However, simply participating in sport will not necessarily have a positive influence on adolescents' developmental outcomes (Holt, 2008).

A range of factors can influence whether sport participation has a positive influence on adolescents' developmental outcomes (Mahoney, Lowe, Vandell, Simpkins, & Zarrett, 2009). One such factor is the setting of the sport (e.g., whether it is conducted in the community or based at school). Extracurricular sports are conducted in the community outside of school hours and are voluntary, meaning that adolescents choose a sport to play, often purely for their own enjoyment. In comparison, varsity and intramural sports are organised and implemented through the school rather than the community. Varsity sports are, however, similar to extracurricular sports in that they are voluntary, focus on one sport, and

take place outside school hours. Although both varsity and extracurricular sport have the potential to positively influence adolescents' psychosocial development, it is acknowledged that the structure and context of the sporting activity play important parts in the development of positive outcomes (Biddle & Asare, 2011; Mahoney & Stattin, 2000). Therefore, it is important to investigate the psychosocial development associated with more specific sport contexts. Specialist Sport Programs (SSPs) are an underexamined form of school-based sport.

Essentially, SSPs are any school-based sporting program that “makes provision to allow athletes to specialise in sporting excellence whilst simultaneously continuing a more conventional academic approach to education” (Gross & Murphy, 1990, p. 6). As the name suggests, students specialise in one sport for the duration of their secondary school education and do so in place of a range of other elective subjects. The primary aim of the SSPs is to develop the psychomotor, tactical, and physiological capacities of the students. However, the focus of the SSPs is often broader than these outcomes. Consequently, the Western Australia Department of Education states that SSPs can “develop character, teach technical skills and self-discipline, and nurture a love of sport” (Department of Education, 2018, online). While investigations of the influence of sport participation on adolescents' psychosocial development have been conducted, there is very little research examining the influence of SSPs on adolescents' psychosocial outcomes.

Study 1, a systematic literature review, was conducted in order to determine the influence of SSPs on adolescent development. Only 10 studies were eligible for inclusion in the review. Of those 10 studies, only two related to adolescents' identity development. Jones, Polman, and Peters (2009) found that in comparison to students' attending government schools without SSPs, participation in an SSP had a positive influence on adolescents' physical self-perceptions, but only for male students. Marsh, Morin, and Parker (2015) also found that specialist students had significantly higher physical self-perceptions than their

non-participating peers. However, over time, the physical self-perceptions of the specialist students declined to the point that there was no longer a significant difference between the two groups.

Study 1 demonstrated that there has been no investigation of the influence of SSPs on adolescents' development of life skills; nor has there been any investigation of the influence of SSPs on various aspects of adolescents' well-being. Furthermore, there has been no investigation of adolescents' psychosocial development in relation to their participation in SSPs conducted within schools located in low SES areas of Australia. Much of the research conducted was situated in elite, private schools—predominantly catering for higher SES students. Considering the negative influence of low SES on adolescents' developmental outcomes, and the potential for sport participation to positively influence adolescents' developmental outcomes, it is important to investigate the influence of SSPs on the psychosocial development of adolescents from more disadvantaged backgrounds.

### **The Current Study**

With 33 SSPs in Western Australia (W.A.)—15 of which are in low SES areas—SSPs have the potential to influence many students, yet the impact of participation in an SSP remains largely underexamined. The purpose of the current study was to understand whether participation in an SSP (located in a low SES area of W.A.) can influence adolescents' psychosocial development. Additionally, as adolescence is a continual process of progress towards maturity, it was important to examine adolescents' psychosocial development over time. The current study therefore sought to determine if participation in an SSP has a positive influence on the physical self-perceptions, social competence, resilience, basic psychological needs satisfaction, and life satisfaction of adolescents attending schools located in low SES areas of W.A.

## **Method**

### **Participants**

Adolescents were sampled from seven of the 15 low SES schools in W.A. that offer SSPs. Two groups of students were involved in the current study: those involved in an SSP (specialist students), and those attending the same school but not involved in the program (comparison students). Students in Years 7–10 (12–15 years of age) were invited to participate in this study. To recruit students into the study, I went to each of the schools involved to speak to the students during their physical education classes. The purpose of this visit was to provide students with information about the study and to explain what would be required of them if they chose to participate. It also provided students with an opportunity to ask the researcher any questions about the study prior to their involvement. In total there were 71 students (63 specialist students and eight comparison students; 48 male and 23 female) who completed the survey twice over a period of a year, as required. The mean age of the participating students was 14.36 (SD = 1.00). However, one specialist student did not complete one of the questionnaires. Therefore, there were only 70 participants in the final analysis of the Teenage Inventory of Social Skills (TISS).

### **Measures**

#### **Physical self-perceptions.**

The Child and Youth Physical Self-Perception Profile (CYPSPP; Whitehead, 1995) has 36 items across six sub-scales. These subscales are Global Self-Esteem, Physical Self-Worth, Sport Competence, Physical Condition, Body Attractiveness, and Physical Strength. Each of these subscales has six items. According to Jones, Polman, and Peters (2009), individuals must “determine which of two opposing statements best characterised how they felt in specific situations, and whether it is ‘really true for me’ or ‘sort of true for me’” (p.



114) along a 4-point scale. Eklund, Whitehead, and Welk (1997) demonstrated the factorial validity of the CYPSP as well as the hierarchical structure of the model in an examination of the physical self-perceptions of 642 secondary school students in the United States of America.

### **Social competence.**

The Teenage Inventory of Social Skills (TISS; Inderbitzen & Foster, 1992) has 40 items split evenly between two scales: a prosocial scale that measures adolescents' positive social skills, and an antisocial behaviour scale that measures their negative social skills (Ingles, Hidalgo, Mendez, & Inderbitzen, 2003). Adolescents complete either the male or female TISS, which consists of behavioural statements that they rate on a 6-point continuum between being very like them and not like them at all. The male and female versions of the TISS differ only in the nouns and pronouns that are used in the statements (Inderbitzen & Foster, 1992). According to Ingles, Hidalgo, Mendez, and Inderbitzen (2003) the TISS is "the only self-report designed exclusively to reflect behaviors functionally related to peer acceptance in adolescence" (p. 505). Inderbitzen and Foster (1992) reported that the TISS has acceptable reliability and validity.

### **Resilience.**

The Resilience Scale for Adolescents (READ; Hjemdal, Friborg, Stiles, Martinussen, & Rosenvinge, 2006) is a self-report scale for 13–19-year-olds. It has 28 items across five domains (personal competence, social competence, structured style, family cohesion, and social resources) (Windle, Bennett, & Noyes, 2011). Hjemdal et al. (2006) demonstrated that the psychometric qualities of the READ were sound. According to Hjemdal et al. the items in the READ address all three categories (individual dispositional attributes, family support and cohesion, and external support systems) identified by previous research as promoting

resilience. According to Windle, Bennett, and Noyes (2011), the READ is an appropriate choice of scale for use with adolescents.

### **Basic psychological needs satisfaction.**

The Basic Psychological Needs Satisfaction—General Scale (BPN—GS; Deci & Ryan, 2000; Gagné, 2003) has 21 items across three factors: autonomy, competence, and relatedness. Each of these subscales has seven questions. Nine of the 21 questions are negatively worded and must be reverse scored prior to analysis. The survey uses a Likert-style scale ranging from 1 (not true at all) to 7 (very true) with higher scores representing the satisfaction of the individuals' needs (Eryilmaz, 2012). Eryilmaz (2012) reported that the BPNS-GS is a valid scale.

### **Life satisfaction.**

The Brief Multidimensional Students' Life Satisfaction Scale (BMSLSS; Seligson, Huebner, & Valois, 2003) is a 5-item scale that measures an individual's satisfaction in regard to their family, friends, school, living environment, and self. It uses a 7-point Likert-style scale with responses ranging from terrible to delighted. Scores from the five items are combined in order to determine the adolescent's general life satisfaction score—with higher scores representing higher levels of life satisfaction. Huebner, Seligson, Valois, and Suldo (2006) highlighted the reliability and validity of this scale for adolescents.

### **Procedure**

Approval was received from the Edith Cowan University Human Research Ethics Committee and the W.A. Department of Education's Evaluation and Accountability Directorate. Schools with SSPs were identified through the W.A. Department of Education's webpage and the ICSEA (Index of Community Socio-Educational Advantage) score was used to define the SES of each of these schools. A range of information is compiled to

determine the ICSEA score of each school in comparison to other schools in W.A. The scores on the index range from 500 (extremely educationally disadvantaged) to 1300 (very educationally advantaged) and the median score on the index is 1000 (*SD* 100). For the purpose of the current study, schools with an ICSEA score below the median were classified as low SES.

Information letters and consent forms were distributed and were to be signed by both the child and their parent/guardian. Once all consent forms were returned, an appropriate time for the students to complete the online survey was arranged with their SSP teacher. The online survey (distributed through Qualtrics) combined all five scales for ease of administration and collection. The online survey also collected information such as the students' name, age, school, and whether they participated in the SSP. Schools were asked to allocate an hour for the students to complete the survey, and it was completed twice with approximately 1 year between baseline and follow-up. The students' survey responses were de-identified as soon as the baseline data were collated with the follow-up data.

## **Analysis**

There were two independent variables in the current study—participation (specialist or comparison students) and time (baseline and follow-up). The dependent variables for each of the psychosocial outcomes are listed in Table 4.

A mixed repeated measures analysis of variance (ANOVA) was planned for each of the psychosocial outcomes with the students' participation type as the between-groups factor. Students' scores for each measure were to be analysed across two time conditions: baseline and follow-up. However, due to a discrepancy in the sample sizes (substantially more specialist students than non-specialist students completed the survey), a decision was made to focus solely on the specialist students' psychosocial outcomes over time. As such, a

dependent-samples t-test was conducted for each of the psychosocial variables. Alpha was set at .05 due to the exploratory nature of the research and SPSS (Version 24) was used to perform the analysis. An overview of the comparison student data is provided in Appendix M

Table 4

*Psychosocial Outcomes Examined*

Psychosocial Outcome	Variables
Physical Self-Perceptions	Sport Competence
	Condition Competence
	Attractive Body Adequacy
	Strength Competence
	Physical Self-Worth
	Global Self-Worth
Social Competence	Prosocial Behaviours
	Antisocial Behaviours
Resilience	Personal Competence
	Social Competence
	Structured Style
	Social Resources
	Family Cohesion
Life Satisfaction	Life Satisfaction
Basic Psychological Needs Satisfaction	Autonomy
	Competence
	Relatedness

## Results

Regarding the participants' responses to the CYPSP, results from the dependent-samples t-test indicated a statistically significant difference in specialist students' physical self-perceptions over time; specifically, their sport competence,  $t(61) = 2.763, p = .008$ , and condition competence,  $t(61) = 2.290, p = .025$  declined over the period of a year. The specialist students' mean score for sport competence in 2015 ( $M = 2.93, SD = .55$ ) was significantly lower than their mean score in 2014 ( $M = 3.10, SD = .64$ ). Similarly, their mean score for condition competence in 2015 ( $M = 3.06, SD = .73$ ) was lower than their mean score in 2014 ( $M = 3.20, SD = .67$ ). A small to moderate effect size was indicated for the mean difference over time for sport competence ( $d = 0.35, 95\% CI = .047, -.296$ ) and condition competence ( $d = 0.29, 95\% CI .018, -.271$ ).

There was no statistically significant difference over time with regards to specialist students' other psychosocial outcomes of social competence, resilience, life satisfaction, or basic psychological needs satisfaction. Descriptive statistics as well as the t-test results for all variables are presented in Table 5.

Table 5

*Descriptive Statistics and t-test Results for the Specialist Students*

Psychosocial Outcome (n)	Variables	Year	Mean (SD)	Mean Difference	95% CI		t	df	p	d
					Lower	Upper				
Physical Self-Perceptions (62)	Sport Competence	2014	3.10 (.64)	.172	.047	.296	2.763	61	.008 *	0.351
		2015	2.93 (.55)							
	Condition Competence	2014	3.20 (.67)	.145	.018	.271	2.290		.025 *	0.291
		2015	3.05 (.73)							
	Attractive Body Adequacy	2014	2.63 (.71)	.080	-.065	.226	1.103		.274	0.140
		2015	2.55 (.77)							
	Strength Competence	2014	2.47 (.66)	.024	-.130	.178	.313		.755	0.040
		2015	2.45 (.70)							
	Physical Self-Worth	2014	3.01 (.73)	.118	-.052	.289	1.381		.172	0.175
		2015	2.89 (.75)							
	Global Self-Worth	2014	3.19 (.63)	.046	-.109	.203	.598		.552	0.076
		2015	3.14 (.63)							

Psychosocial Outcome ( <i>n</i> )	Variables	Year	Mean ( <i>SD</i> )	Mean Difference	95% CI		<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
					Lower	Upper				
Social Competence (65)	Prosocial Behaviours	2014	81.43 (16.03)	.061	-4.239	4.362	.029	64	.977	0.036
		2015	81.36 (16.78)							
	Antisocial Behaviours	2014	52.96 (19.92)	.569	-3.320	4.459	.292		.771	0.036
		2015	52.40 (17.59)							
Resilience (66)	Personal Competence	2014	30.05 (4.59)	-.136	-1.196	.923	-.257	65	.798	-0.032
		2015	30.18 (4.60)							
	Social Competence	2014	18.85 (3.17)	.227	-.521	.975	.607		.546	0.075
		2015	18.62 (3.03)							
	Structured Style	2014	14.35 (3.08)	-.379	-1.066	.308	-1.101		.275	-0.135
		2015	14.73 (2.86)							
	Social Resources	2014	20.30 (3.38)	-.379	-1.172	.415	-.953		.344	-0.117
		2015	20.68 (3.40)							
	Family Cohesion	2014	23.62 (4.26)	.000	-.880	.880	.000		1.000	0.000
		2015	23.62 (4.63)							

Psychosocial Outcome ( <i>n</i> )	Variables	Year	Mean ( <i>SD</i> )	Mean Difference	95% CI		<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
					Lower	Upper				
	Overall Resilience	2014	107.17 (15.79)	-.667	-3.980	2.646	-.402		.689	-0.049
		2015	107.83 (15.50)							
Life Satisfaction (67)	Life Satisfaction	2014	33.43 (5.14)	-.850	-1.959	.258	-1.532	66	.130	-0.187
		2015	34.28 (4.90)							
Basic Psychological Needs Satisfaction (67)	Autonomy	2014	4.09 (.73)	.029	-.158	.218	.316	66	.753	0.039
		2015	4.06 (.79)							
	Competence	2014	4.17 (.67)	-.053	-.220	.113	-.638		.526	-0.078
		2015	4.22 (.69)							
	Relatedness	2014	4.81 (.75)	-.058	-.256	.140	-.583		.562	-0.071
		2015	4.87 (.82)							



## Discussion

The psychosocial tasks of adolescence are complex (Sturdevant & Spear, 2002) and relate to an individuals' identity development, life skills development, and well-being. The aim of the current study was to determine if participation in an SSP had a positive influence on the psychosocial development of adolescents attending schools located in low SES areas of W.A. To achieve this, the physical self-perceptions, social competence, resilience, basic psychological needs satisfaction, and life satisfaction of specialist students were examined over the period of a year.

The results of the current study demonstrate a statistically significant difference in specialist students' mean score for sport and condition competence over time. That is, over the course of a year, the specialist students' perceptions of their own competence declined. As such, the current study supports the results of Marsh, Morin and Parker's (2015) study that also found the physical self-perceptions of specialist students declined over time.

Marsh, Morin, and Parker (2015) hypothesised that SSP students' physical self-perceptions decline in secondary school because of a "more demanding frame of reference against which elite athletes evaluate themselves" (p. 159). That is, during primary school, these students would have compared themselves to a broad array of classmates and determined that their own strength lay in sport/physical activity. However, upon starting the SSP in secondary school, they would compare themselves to peers who are equally or more talented sports people than themselves, resulting in their physical self-perceptions starting to decline.

Despite the specialist students' scores on two of the sub-scales declining over time, the mean global self-worth for the group remained stable. Although an improvement in students' outcomes would be the ideal result, the stability of the specialist students' self-

worth is an acceptable outcome, because previous research has found low SES adolescents to be at an increased risk for low self-esteem in comparison to their higher SES peers (McLoyd, Kaplan, Purtell, Bagley, Hardaway, & Smelts, 2009). The self-worth of the specialist students in the current study however was already high at the baseline measurement (3.1 out of a possible 4). As such, the specialist students' self-worth remained stable.

The analysis of specialist students' social competence, resilience, basic psychological needs satisfaction, and life satisfaction scores showed no significant difference over the period of a year. However, an inspection of the specialist students' mean scores on both the social skills and resilience scales indicate that the specialist students had positive levels of resilience and were socially competent. This is an important result as previous research demonstrates that low SES adolescents are more vulnerable than their higher SES peers (Totten, 2007), and that low SES increases adolescents' risk for difficult peer relations and behaviour problems (McLoyd, Kaplan, Purtell, Bagley, Hardaway, & Smelts, 2009). As participation in sport has previously been associated with adolescents' social competence and resilience (Hjemdal, Friborg, Stiles, Martinussen, & Rosenvinge, 2006; Ullrich-French, McDonough, & Smith, 2012), it is thought that the SSP has positively influenced the specialist students' resilience levels.

Examination of the specialist students' results shows that their mean life satisfaction score was already high in the baseline measurement. Consequently, it was unlikely an improvement would be seen in the follow-up measurement. In comparison, the specialist students' mean level of basic psychological need satisfaction was closer to neutral (4 out of a possible 7), raising the question of why there was no improvement in specialist students' basic psychological needs satisfaction.

An additional examination of each of the psychosocial variables showed that specialist students' mean physical self-perceptions, prosocial behaviours, resilience, basic psychological needs satisfaction, and life satisfaction scores were higher than the neutral response to the scale; while their mean antisocial behaviours score was below the neutral response to the scale.

Although the specialist and non-specialist students' data cannot be compared due to the discrepancy in sample sizes, an examination of the non-specialist students' data suggests very similar results to those of the specialist students. Based on the institutional resources model (Jencks & Meyer, 1990; Leventhal & Brooks-Gunn, 2000), the similarity between specialist and non-specialist students' data could be due to the general quality of the school that is hosting the SSP. That is, despite being located in a lower SES area, schools of a higher quality are more likely to put greater effort into providing programs such as the SSP and this overall effort results in better outcomes for all students attending the school, not just for the specialist students.

The attainment of healthy developmental outcomes during adolescence is critical for a successful transition to adulthood (Blum, Astone, Decker, & Mouli, 2014; Fraser-Thomas & Cote, 2009). Contextual factors can have either a positive, negative, or protective influence on adolescents' development. SSPs are a relatively new form of school-based sport that have the potential to positively influence adolescents' psychosocial development. With 33 SSPs in W.A., 15 of which are located in low SES areas, SSPs have the potential to influence many students.

The current study found specialist students' physical self-perceptions (specifically their sport and condition competence) declined over the period of a year. However, specialist students' global self-worth remained high and stable over the same period. Analysis of the

data also demonstrated no statistically significant difference over time regarding specialist students' social competence, resilience, basic psychological needs satisfaction, or life satisfaction.

One of the strengths of this study is that, although focused on a specific school-based sport program, the study sampled students from seven schools in the Perth (capital city) metropolitan area of W.A. The students involved in the study therefore specialised in different sports, under the leadership of different SSP teachers, consequently increasing the generalisability of the results to other SSPs in low SES areas. A limitation of the study, however, was that despite the author's best efforts to recruit non-specialist students as participants, there were not enough non-specialist student participants to allow for a comparison with the specialist students' data. As a result, it is difficult to confirm that it was only the SSP that influenced the adolescents' outcomes.

This is the first study to examine the social competence, resilience, basic psychological needs satisfaction, and life satisfaction of students in relation to their participation in an SSP, so the study's results make a significant contribution to the literature and provide a benchmark for future research. Furthermore, this research is the first to study the physical self-perceptions of SSP students living in low SES areas. Considering the negative influence of low SES on adolescents' developmental outcomes (McLoyd, Kaplan, Purtell, Bagley, Hardaway, & Smelts, 2009; Totten, 2007; Zaborskis, Grincaite, Lenzi, Tesler, Moreno-Maldonado, & Mazur, 2019), the current study demonstrates the potential for SSPs to positively influence adolescents' psychosocial development.

## **Preface to Study 4**

So far, the studies included in this thesis have examined the students', parents', teachers', and graduates' perceptions of the influence of participation in SSPs, as well as the psychosocial development of specialist students attending schools located in low SES areas of W.A. However, it was also an aim of this thesis to understand the influence of participation in an SSP in relation to specialist students' educational outcomes.

Two of the articles from the literature included in Study 1, the systematic review, demonstrated that SSPs have the potential to positively influence adolescents' educational outcomes, specifically for low SES adolescents. Levačić and Jenkins (2006) found that the academic performance of schools that offer SSPs improved more over time than schools with other specialist programs or schools without any specialist program, while Taylor (2007) found that this improvement was greater at schools with a higher percentage of students from low SES backgrounds. However, both these studies were conducted in the U.K. and used a national dataset to examine the overall performance of the school rather than analysing data generated from the individual students over time. Further research is however required to examine the academic performance of specialist students outside of the U.K.

Although analysis of interview data in Study 2 demonstrated that SSPs were perceived to facilitate specialist students' engagement with school, it is important to quantitatively examine specialist students' academic performance as well as their engagement with school. Therefore, the aim of Study 4 was to examine the influence of participation in an SSP on adolescents' educational outcomes.

## **Study 4**

### **Educational Outcomes of Adolescents Participating in Specialist Sport Programs (SSPs) in Low SES Areas of Western Australia**

Engagement with learning is one of the four main goals of adolescence, which if achieved by the age of 15 years, sets an individual up for a successful transition into adult life (Blum, Astone, Decker, & Mouli, 2014). Research examining student–school engagement demonstrates that students’ engagement with school can predict their grades in core subjects (Hazel, Vazirabadi, Albanes, & Gallagher, 2014). Although academic achievement is only one aspect of education, it is important with regard to students’ future economic and social opportunity (Department of Education & Training, 2018, p. 2). Completion of senior secondary school (Years 11 and 12 in Australia) has specifically been found to increase the likelihood of an individual “continuing with further study, entering the workforce, and improved living conditions” (Department of Education & Training, 2018, p. 47). Despite findings of the long-term, positive influence of engagement with learning and academic achievement on adult life, there are “a substantial number of students who do not complete Year 12” (Department of Education & Training, 2018, p. 47), which could be due to the decrease in school engagement observed from primary to secondary school (Brown & Larson, 2009). Other factors that may influence adolescents’ educational outcomes include the socio-economic status (SES) of the adolescent and their participation in sport.

Low SES has been found to have a negative association with adolescents’ educational outcomes. In comparison to their higher SES peers, students from low SES backgrounds are more likely to experience school failure (Brownell, Roos, MacWilliam, Leclair, Ekuma, & Fransoo, 2010). In Australia, it has been reported that students from low SES backgrounds have lower levels of school attendance (Hancock, Shepherd, Lawrence, & Zubrick, 2013),

academic achievement that is below the minimum national standard (ABS, 2011), and lower levels of secondary school completion (Lamb, Jackson, Walstab, & Huo, 2015). Furthermore, students from low SES backgrounds are less likely to enrol in or succeed at further education and training (Black & Walsh, 2009), thus perpetuating the cycle of disadvantage.

In contrast, sport participation during secondary school has been found to have a positive association with adolescents' educational outcomes with sport participants reporting more positive educational outcomes than non-participants (Barber, Eccles, & Stone, 2001). Systematic reviews focusing on sport and physical activity conducted within schools have concluded that as well as having a positive influence on adolescents' motor performance and self-concept, there is a positive association between adolescents' participation in sport and physical activity and their academic achievement (Demetriou & Honer, 2012; Rasberry et al., 2011). However, simply participating in sport will not necessarily improve adolescents' outcomes (Holt, 2008).

Negative outcomes have also been associated with adolescents' participation in sport (Garry & Morrissey, 2000; Scanlan, Babkes, & Scanlan, 2005), and some parents have voiced concerns that the time spent in physical education and school sport may interfere with students' academic achievement. These parents state that in order to improve students' educational outcomes, schools should focus on academic subjects and reduce the amount of time spent in physical education (Bailey et al., 2009).

A range of factors can influence whether adolescents experience positive or negative outcomes as a result of sport participation (Mahoney, Lowe, Vandell, Simpkins, & Zarrett, 2009). One such factor is the setting of the sport (e.g., whether it is conducted in the community or based at school). Extracurricular sports are conducted in the community outside of school hours and are voluntary, meaning that adolescents choose a sport to play,

often purely for their own enjoyment. In comparison, varsity and intramural sports are organised and implemented through the school rather than the community. Varsity sports are, however, similar to extracurricular sports in that they are voluntary, focus on one sport, and take place outside school hours. Both varsity and extracurricular sport participation has been found to have a positive influence on adolescents' school attendance, educational aspirations, academic self-concept, and university attendance (Marsh, 1993).

Despite findings demonstrating the positive influence of participation in extracurricular and varsity sport on adolescents' educational outcomes, it is acknowledged that the structure and context of the sporting activity plays an important part in the development of positive outcomes (Biddle & Asare, 2011; Mahoney & Stattin, 2000). Therefore, it is important to investigate the educational outcomes associated with more specific sport contexts. An underexamined form of school-based sport is the Specialist Sport Program (SSP).

An SSP is a secondary school sport program through which students specialise in one sport in place of a range of elective subjects. The aim of the SSP is to develop the students' psychomotor, tactical, and physiological capabilities while the students continue their more conventional academic education (Gross & Murphy, 1990). SSPs are similar to both extracurricular and varsity sports. With all three types of sport, adolescents specialise in one sport and dedicate a certain amount of time to their involvement in the sport. However, SSPs are also different to extracurricular and varsity sports. Specifically, SSPs are organised and delivered to the students mostly during school time in place of other elective subjects. In comparison, varsity sports, although delivered by the school, are conducted outside school hours; and extracurricular sports are delivered out of school hours through the community.



While previous research has considered the influence of physical activity, physical education, and sport participation on adolescents' educational outcomes (Bailey, 2018; Bailey, Hillman, Arent, & Petitpas, 2013; Bradley, Keane, & Crawford, 2013), only two studies have investigated the influence of participation in an SSP on adolescents' academic achievement.

Levačić and Jenkins (2006) used the General Certificate of Secondary School Examination (GCSE) results to compare the academic performance of schools with specialist programs (such as SSPs) to schools without specialist programs. The GCSE is a standardised measure of students' academic achievement in their final year of compulsory education. The GCSE results were used to rank order schools into league tables that distinguish between "successful" and "unsuccessful" schools. Although the effect size was modest, Levačić and Jenkins' (2006) study demonstrated a significant difference in the academic performance between the school types. Specifically, there was a larger improvement over time in the GCSE results of schools with SSPs than schools with either specialist arts or language programs, or in schools without a specialist program.

Taylor (2007) also investigated the influence of specialist programs by examining the position of schools on a league table based on students' GCSE results. Students attending specialist schools were again found to have better academic achievement than those attending non-specialist schools. However, the margin of difference was less than that outlined by Levačić and Jenkins (2006). Additional analyses conducted by Taylor (2007) also revealed that the observed improvement in academic achievement over time for schools with SSPs was greater at schools with a high percentage of students from low SES backgrounds.

These are the only two studies that have examined the influence of participation in an SSP on adolescents' academic outcomes. Both studies demonstrate the positive influence

SSPs can have on adolescents' academic achievement. Furthermore, the results of Taylor's (2007) study suggest that students from low SES backgrounds benefit more (in terms of their academic achievement) from participating in an SSP than students from higher SES backgrounds. Although both studies demonstrate the positive influence of SSPs, there remains a gap in our understanding of the influence of SSPs on adolescents' educational outcomes.

There has been no investigation of adolescents' academic achievement in relation to their participation in SSPs conducted within schools located in low SES areas of Australia. Nor has there been any investigation of students' academic achievement in relation to their participation in SSPs conducted earlier in their secondary school education. The existing studies (both conducted in the U.K.) examined students' academic achievement in relation to participation in SSPs using data from the students' final year of compulsory education. As such, the influence of SSPs on the academic performance of younger adolescents is unknown. Additionally, the existing studies analysed data at a school level, rather than at the level of the student. Although an improvement over time was observed, this was for a different cohort of students with a potential difference in level of academic achievement from their predecessors. It is therefore important to examine academic achievement in relation to SSPs at a student, rather than school, level.

Furthermore, students' engagement with school is considered to be an essential element for overcoming the educational disadvantage adolescents face due to their low SES (Parkville Global Advisory, 2014). This is because greater school engagement has previously been associated with greater academic performance (Park, Holloway, Arendtsz, Bempechat, & Li, 2012). Study 2 demonstrated that participation in an SSP was perceived to facilitate students' engagement with school. However, school engagement has not previously been measured to determine if differences between specialist and non-specialist students exist.

Consequently, it is important to investigate both the academic achievement and school engagement of students in relation to their participation in an SSP. Additionally, as adolescence is a continual process of progress towards maturity, it is important to examine adolescents' educational outcomes over time.

With 33 SSPs in Western Australia (W.A.)—15 of which are in low SES areas—SSPs have the potential to influence many students, yet the impact of participation in an SSP remains largely underexamined. The purpose of the current study was to understand whether participation in an SSP can influence early adolescents' educational outcomes. Specifically, the current study sought to determine if participation in an SSP has a positive influence on the educational outcomes of adolescents attending schools located in low SES areas of W.A. Based on the findings of Levačić and Jenkins (2006) and Taylor (2007) it was hypothesised that participation in an SSP would have a positive influence on adolescents' academic performance, and, based on the findings of Study 2, it was also hypothesised that participation in an SSP would have a positive influence on adolescents' school engagement scores.

## **Method**

### **Participants**

Adolescents were sampled from seven low SES schools in W.A. that offer SSPs. Two groups of students were involved in the current study: those involved in an SSP (specialist students), and those attending the same school but not involved in the program (comparison students). Students in Year 7 through to Year 10 (12–15 years of age) were invited to participate in this study. To recruit students into the study, I went to each of the schools involved to speak to the students during their physical education classes. The purpose of this visit was to provide them with information about the study and to explain what would be

required of them if they chose to participate. It also provided students with an opportunity to ask the researcher any questions about the study prior to their involvement. Students could nominate to provide data relating to their academic achievement, their engagement with school, or both (achievement and engagement). With regards to academic achievement, 93 students (comprised of 68 specialist and 25 comparison students) provided informed consent. With regard to school engagement, 73 students (comprised of 64 specialist and nine comparison students) provided informed consent. The difference in participant numbers for each outcome may be due to the way the data were collected. That is, to provide data for the analysis of students' academic achievement, students simply had to provide permission for the school to release their grades to the researcher, whereas, to provide data relating to their engagement with school, students had to complete an online survey that combined five other scales measuring students' psychosocial development.

## **Measures**

Adolescents' school grades are regularly reported to them and their parents through a grading scale (A being the best grade and E being the worst grade). This grading scale is thought to demonstrate the students' achievement in relation to a school subject. For the current study, the students' academic achievement was determined by examining their grades for English, Mathematics, Science, Society and Environment (S&E), and Health and Physical Education (HPE). The students' grades were assigned the following values: A = 5, B = 4, C = 3, D = 2, and E = 1. Thus, a higher score indicated a better grade.

The Student–School Engagement Measure (SSEM; Hazel, Vazirabadi, & Gallagher, 2013) has 22 items across three factors: aspirations (4 items), productivity (12 items), and belonging (6 items). The survey uses a Likert-style scale ranging from 1 (strongly disagree) to 10 (strongly agree). Scores from all items are combined to get an overall engagement

score, with higher scores indicating greater engagement. Hazel, Vazirabadi, Albanes, and Gallagher (2014) reported that this scale has good reliability.

## **Procedure**

Approval was received from the Edith Cowan University Human Research Ethics Committee and the W.A. Department of Education's Evaluation and Accountability Directorate. Schools with SSPs were identified through the W.A. Department of Education's webpage and the ICSEA (Index of Community Socio-Educational Advantage) score was used to define the SES of each of these schools. A range of information is compiled to determine the ICSEA score of each school in comparison to other schools in W.A. The scores on the index range from 500 (extremely educationally disadvantaged) to 1300 (very educationally advantaged) and the median score on the index is 1000 (S.D. 100). For the purpose of the current study, schools with an ICSEA score below the median were classified as low SES.

Information letters and consent forms were distributed and were to be signed by both the child and their parent/guardian. Once all consent forms were returned, the researcher provided each school with a list of students who had given permission for their grades to be collected. Schools collated the information required and provided it to the researcher either as a hard copy or as a PDF file that was sent via email. Students' grades were collected twice (Semester 1, 2014 and Semester 1, 2015) to allow for a repeated measures design. As such there was a 1-year gap between the baseline and final results.

The researcher also liaised with teachers to organise a time for the students to complete the SSEM. This survey was administered online through Qualtrics as part of a larger study (that is, data for Studies 3 and 4 were collected simultaneously). As such, the adolescents required access to a computer with internet access in order to participate. The

online survey also collected information such as the students' name, age, school, and whether they participated in the SSP. Schools were asked to allocate an hour for the students to complete the survey, and it was completed twice with approximately one year between baseline and follow-up. The students' grades and engagement scores were de-identified as soon as the data for each year were collated.

## **Analysis**

There were two independent variables in the current study—participation (specialist or comparison students) and time (baseline and follow-up). For academic achievement, the grades for each of the five subjects (English, Mathematics, Science, S&E, and HPE) were the dependent variables. For engagement, there were four dependent variables: aspirations, belonging, productivity, and overall engagement.

A mixed repeated measures analysis of variance (ANOVA) was planned for each of the dependent variables with students' participation type as the between-groups factor. Students' scores were to be analysed across two time conditions: baseline (2014) and follow-up (2015). However, due to a discrepancy in sample sizes (there were substantially more specialist students than comparison students), a decision was made to focus solely on the specialist students' academic performance and engagement with school over time. As such, a dependent-samples *t*-test was conducted for each of the dependent variables. Alpha was set at .05 due to the exploratory nature of the research and SPSS (Version 24) was used to perform the analysis. An overview of the comparison student data is provided in Appendix N.

## **Results**

The analysis demonstrated a statistically significant difference over time with regards to specialist students' mean grade for Mathematics,  $t(62) = 2.072, p = .042$ . The specialist students' mean grade for Mathematics in 2014 (3.08,  $SD = .97$ ) was significantly lower than

their mean score in 2015 (3.30,  $SD = .96$ ). A small effect size ( $d = .26$ ) was indicated by the mean difference of -0.22 between specialist students' mean Mathematics grades for 2014 and 2015 (99% CI = -0.44, - -0.01). There was no statistically significant difference over time with regards to specialist students' mean grade in the other four school subjects. Descriptive statistics and the results of the  $t$ -test on specialist students' academic performance are presented in Table 6.

The analysis demonstrated no statistically significant difference over time with regards to specialist students' aspirations, belonging, productivity, or overall engagement. Descriptive statistics and the results of the  $t$ -test on specialist students' school engagement are presented in Table 7.

Table 6

*Descriptive Statistics and t-test Results for the Specialist Students (Academic Performance)*

Variables (n)	Year	Mean (SD)	Mean Difference	95% CI		<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
				Lower	Upper				
English (65)	2014	3.25 (0.71)	0.10	-0.11	0.30	0.903	64	0.369	0.112
	2015	3.15 (0.87)							
Mathematics (63)	2014	3.08 (0.97)	-0.22	-0.44	-0.01	2.072	62	0.042*	0.261
	2015	3.30 (0.96)							
Science (55)	2014	3.44 (0.96)	0.19	-0.10	0.47	1.277	54	0.207	0.172
	2015	3.25 (1.13)							
S&E (54)	2014	3.17 (0.84)	-0.05	-0.29	0.18	0.476	53	0.635	0.065
	2015	3.22 (0.88)							
HPE (57)	2014	4.39 (0.70)	0.13	-0.10	0.34	1.123	56	0.266	0.149
	2015	4.26 (0.81)							



Table 7

*Descriptive Statistics and t-test Results for Specialist Students (Student School Engagement)*

Variables	Year	Mean (SD)	Mean Difference	95% CI		<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
				Lower	Upper				
Aspirations	2014	4.60 (1.12)	0.18	- 0.23	0.60	0.872	64	0.387	0.109
	2015	4.42 (1.14)							
Belonging	2014	5.09 (1.25)	0.20	- 0.17	0.60	1.057		0.294	0.132
	2015	4.89 (1.02)							
Productivity	2014	6.19 (0.92)	0.06	- 0.20	0.32	0.445		0.658	0.056
	2015	6.13 (1.03)							
Engagement	2014	6.05 (0.80)	0.13	- 0.13	0.39	1.019		0.312	0.127
	2015	5.92 (0.81)							

## Discussion

The aim of this study was to investigate the effect of involvement in SSPs on the educational outcomes of adolescents attending schools in low SES areas of W.A. To achieve this, the academic achievement and school engagement of specialist students and a comparison group of non-specialist students were examined over the period of a year. However, due to a lack of non-specialist students providing informed consent, a comparison between the two groups was unable to be made.

The results of the current study demonstrate a statistically significant difference in the specialist students' mean grade for Mathematics over time. That is, over the period of a year, the specialist students' mean grade for Mathematics improved. There was, however, no significant difference over time with regards to specialist students' mean grade in the other four school subjects.

Interpretation of specialist students' academic achievement should consider the grade that the mean score represents. The students' grade in each subject describes the "expected level that the majority of students are achieving by the end of a given year of schooling" (School Curriculum and Standards Authority, 2016, p. 2). According to the School Curriculum and Standards Authority (2016), a C grade demonstrates a satisfactory level of achievement, while a B grade demonstrates a high level of achievement.

In 2014, specialist students' mean grade for English, Mathematics, Science, and S&E was a C. That means that despite the amount of time specialist students spend in the SSP, they are still achieving, on average, a satisfactory level for English, Mathematics, Science, and S&E subjects. Furthermore, the grade a student is awarded is based upon what is expected at that particular year level, so that as students move through the year levels, the expectations placed on them increase. Although specialist students' grades did not improve

over the period of a year, they maintained a satisfactory level of achievement in English, Mathematics, Science, and S&E, despite an increase in the difficulty level of the content being taught.

The results of the current study showed an improvement in the specialist students' mean grade for Mathematics, not their other school subjects. As such, the current study only provides partial support for the results of Levačić and Jenkins (2006) and Taylor (2007). Levačić and Jenkins' (2006) study demonstrated a larger improvement over time in the GCSE results of schools with SSPs than schools without specialist programs. This was confirmed by Taylor (2007) who also found that schools with a high percentage of students from low SES backgrounds had a greater improvement over time, than those with a higher percentage of students from high SES backgrounds. Although a comparison could not be made between the academic performance of specialist and non-specialist students due to a discrepancy in the sample sizes, an examination of the non-specialist students' data indicates that they also averaged a C grade across all subjects. Consequently, these results may ease parents' existing concerns regarding the time spent in Physical Education classes detracting from students' academic achievement (Bailey, et al. 2009).

The current study also demonstrated that the school engagement of specialist students remained stable over the period of a year. This was an important finding as engagement with school has previously been found to decrease in early adolescence (Brown & Larson, 2009).

Based on the findings of Study 2, it was hypothesised that specialist students would have positive school engagement scores. Examination of the mean score for each of the engagement factors showed that the school engagement of specialist students was close to the neutral response. That is, out of a possible score of 10, specialist students' mean response ranged from 4 to 6. This, however, is not to say that the SSP did not have a positive influence

on specialist students' engagement with school. Unlike previous research conducted by Brown and Larson (2009), the specialist students' level of engagement with school did not decrease. Additionally, the specialist students, their parents and teachers, as well as graduates of the SSPs who participated in Study 2 all felt that participation in the SSP facilitated students' engagement with school. The specialist students involved in the current study may not have the highest level of engagement with school, however Study 2 revealed that many specialist students would not attend school if it were not for the SSP.

### **Conclusion**

The results of the current study make a significant contribution to the literature. This study is the first to examine the educational outcomes of Australian students in relation to their participation in an SSP. It is also the first study worldwide to examine both the academic achievement and the engagement levels of low SES adolescents involved in SSPs, and provides baseline data for future studies.

One of the strengths of the current study is that it sampled students from seven different schools, increasing the generalisability of the results because the SSPs at the schools involved focused on different sports, under the leadership of different teaching staff. However, this study was limited by its lack of a comparison group, making it difficult to confirm the influence of the SSP on the specialist students' academic achievement and school engagement.

Although there is room for improvement with regard to specialist students' engagement with school, the results of the current study demonstrate that specialist students are making satisfactory academic progress despite the amount of time spent in the SSP. This is important because engagement with learning is one of the main goals of early adolescence (Blum, Astone, Decker, & Mouli, 2014).

## **Summary of Section 2**

The overarching goal of this thesis was to investigate the educational and psychosocial development of adolescents involved in SSPs located in low SES areas of W.A. To begin, Study 1 collated and evaluated the existing literature on SSP participation. The studies included in this systematic review demonstrate that SSPs have the potential to positively influence adolescent outcomes. However, there was an obvious lack of research, specifically research conducted in Australia, and with schools located in low SES areas. It was important to address this lack of research because (a) every country has a different education system within which the SSPs are embedded, and (b) several studies included in the review suggested that SES could mediate the association between participation in an SSP and adolescents' developmental outcomes.

Due to the wide range of variables that had been examined in relation to adolescents' participation in an SSP and the lack of research conducted in low SES areas of Australia, the purpose of Study 2 was to explore key stakeholders' perceptions of the impact of participation in an SSP for adolescents attending schools located in low SES areas of W.A. Analysis of the interviews conducted with specialist students and their parents, as well as with teachers and graduates of the program revealed the positive influence of SSPs. This positive influence included the facilitation of students' engagement with school, the development of students' life skills, and the development of positive relationships through the program. The elements of the SSP that were perceived to be influential were also discussed.

Despite the positive findings from Study 2, it is important to note that qualitative research is often criticised for its small sample sizes and lack of generalisability between contexts (Castro, Kellison, Boyd, & Kopak, 2010). To overcome this problem, and to strengthen the knowledge base regarding the influence of SSPs for adolescents living in low SES areas of W.A, two quantitative studies were also conducted. Study 3 examined specialist

students' psychosocial development, while Study 4 examined the specialist students' educational outcomes.

Study 3 found a significant decline in specialist students' physical self-perceptions over time. However, the specialist students' social competence, resilience, basic psychological needs satisfaction, and life satisfaction all remained stable over the period of a year. Study 4 found specialist students' mean grade for Mathematics improved over time, however the specialist students' mean grade for all other subjects, and their level of engagement with school remained stable over the period of a year.

Section 3 of this thesis discusses the results from all four studies in relation to pertinent literature.

## SECTION 3

## **General Discussion**

A number of studies have demonstrated that meaningful participation in school and sport activities can act as a protective factor for adolescents who face possible disadvantage due to living in a low SES neighbourhood (Waller, 2001). SSPs are a school-based sport program that has the potential to positively influence adolescents' developmental outcomes. However, to date, no study has investigated the development of adolescents participating in SSPs located in low SES areas. Therefore, the overarching purpose of this thesis was to investigate the educational and psychosocial development of adolescents involved in SSPs in low SES areas of Perth, Western Australia (W.A.). To achieve this goal, four studies were conducted. This chapter summarises the results of the four studies and discusses the implications of the findings before outlining recommendations for future research.

The purpose of Study 1, which was a systematic literature review, was to investigate the existing research examining the influence of participation in an SSP on adolescent development. This review revealed a general lack of research conducted on SSPs, with only 10 studies being eligible for inclusion in the review. Of the 10 studies, two examined the academic performance of schools with SSPs; six studies examined the adolescents' psychosocial outcomes (such as their physical self-perceptions, and their conscientiousness, self-determination, and satisfaction with an SSP); and two studies investigated the elements of an SSP that were perceived to contribute to the positive developmental experiences of the students involved in SSPs.

Study 1 demonstrated the potential for SSPs to positively influence adolescents' educational and psychosocial development. However, further research was needed to examine—both qualitatively and quantitatively—how SSPs can influence the educational and



psychosocial development of adolescents, specifically in low SES areas of Australia where many adolescents are unable to access extracurricular sport opportunities.

The purpose of Study 2, a qualitative exploration of SSPs located in low SES areas of W.A., was to investigate key stakeholders' perceptions of the impact of participation in an SSP. Students, teachers, parents, and graduates of the SSPs all reported on the positive influence the program had on the students involved. For example, it was reported that SSPs facilitate students' engagement with school and assist with the development of students' life skills. The individual- and program-level factors underpinning the positive influence of the program were also identified. The individual-level factors included the intrinsic interest in sport of both the students and their SSP teacher, and the personal qualities of the SSP teacher. The program-level factors were the amount of time spent participating in the program and the code of conduct implemented as part of the program. The development of positive relationships, both between the students and between the students and their SSP teacher, were perceived by all stakeholders to be a positive outcome associated with participation in an SSP as well as being a factor underpinning the positive influence of the program.

Studies 3 and 4 quantitatively investigated the psychosocial development and educational outcomes of adolescents in relation to their participation in an SSP located in low SES areas of W.A. The aim of Study 3 was to investigate the possible effect of involvement in SSPs on the psychosocial development of adolescents attending schools in low SES areas of W.A. To achieve this aim, the physical self-perceptions, social competence, resilience, basic psychological needs satisfaction, and life satisfaction of specialist students were examined over the period of a year. It was found that while the specialist students' physical self-perceptions (specifically their sport and condition competence) declined over time, their other measures of psychosocial well-being (social competence, resilience, basic

psychological needs satisfaction, and life satisfaction) remained stable over the period of a year.

The aim of Study 4 was to investigate the effect of involvement in SSPs on the educational outcomes of adolescents attending schools in low SES areas of W.A. To achieve this aim, the academic performance and school engagement of specialist students were examined over the period of a year. Analysis of the data indicated a statistically significant improvement in specialist students' performance in Mathematics, however their grades for all other subjects and their level of school engagement remained stable over the period of a year.

The overarching purpose of this thesis was to investigate the educational and psychosocial development of adolescents involved in SSPs located in low SES areas of Perth, W.A. The findings of the four studies will now be discussed in relation to each other and to previous research.

### **The Educational Outcomes of Specialist Students**

One aim of the current thesis was to determine what influence, if any, participation in an SSP has on the educational outcomes of adolescents attending schools in low SES areas of W.A. Study 2 (the qualitative exploration of key stakeholders' perceptions) found SSPs to have a positive influence on adolescents' engagement with school while Study 4 (a quantitative investigation of impact of SSPs on adolescents' educational outcomes) essentially found specialist students' academic achievement and school engagement to remain stable over the period of a year.

Previous research identified through the systematic literature review (Study 1) found a greater school-level improvement in academic performance for schools with SSPs than schools without specialist programs (Levačić & Jenkins, 2006; Taylor, 2007). Additionally, the study conducted by Taylor (2007) demonstrated that schools with a higher percentage of

students from low SES backgrounds benefited more, in terms of their academic performance, than schools with a higher percentage of students from high SES backgrounds. Based on the results of Levačić and Jenkins (2006) and Taylor (2007), it was hypothesised that specialist students in the current research would have better academic performance than the comparison students. However, due to a discrepancy in sample sizes, this was unable to be confirmed by Study 4. The results of Study 4 did however demonstrate a significant improvement in specialist students' Mathematics grade, and stability in their achievement in all other subjects.

Previous research has found parents to have concerns regarding the time spent in Physical Education classes detracting from students' academic achievement (Bailey et al., 2009). At first glance, the results of the current research may add to parents' concerns, considering there was no practical improvement in the students' grades over the period of a year. However, it should be noted that both specialist students and non-specialist students had an average C grade for English, Mathematics, Science, and S&E. According to the School Curriculum and Standards Authority (2016) an achievement standard "describes an expected level that the majority of students are achieving by the end of a given year of schooling. Meeting the achievement standard at a satisfactory level is described by a C grade" (p. 2). As such, despite the amount of time specialist students spend in the SSP, they are still achieving at a satisfactory level.

Additionally, it needs to be emphasised that the grade a student is awarded is based upon what is expected for students at that particular year level. Therefore, as students move through the year levels, the expectations placed on them increase. As such, the maintenance of a satisfactory grade, despite an increase in the difficulty level of the content being taught, is a positive finding. The findings of Study 2 relating to the influential elements of the SSPs may explain specialist students' satisfactory academic performance. Many of the schools involved in Study 2 had a code of conduct that the specialist students had to respect in order

for them to remain in the program, including that they must maintain acceptable grades in all subjects. As the students were intrinsically motivated to play their sport, they adhered to these requirements.

Previous research has firmly established the association between an individual's academic achievement in adolescence and their future prospects in adulthood (Benner, 2016). Completion of secondary school (Years 11 and 12 in Australia) has been found to increase the likelihood of an individual "continuing with further study, entering the workforce, and improved living conditions" (Department of Education & Training, 2018, p. 47). Although academic achievement is important with regard to economic and social opportunity (Department of Education & Training, 2018, p. 2), it is only one aspect of education. Students' level of engagement with school is also important to consider.

In Study 2, key stakeholders perceived SSPs to facilitate specialist students' engagement with school. Study 4 then demonstrated that specialist students' level of school engagement was close to the neutral response to the scale. Study 4 also demonstrated that specialist students' level of school engagement remained stable over the period of a year. These are important findings because engagement with learning is one of the four main goals of adolescence and engagement with school has previously been found to decrease during adolescence (Blum, Astone, Decker, & Mouli, 2014; Brown & Larson, 2009).

Previous research provides several explanations for the decrease typically observed in adolescents' engagement with school. These include: distant student–teacher relationships (Brown & Larson, 2009), an imbalance between the level of challenge provided by an activity and the students' level of skill (Nakamura & Csikszentmihalyi, 2005; Shernoff & Csikszentmihalyi, 2009), and the students' perception of safety at school (American Institute for Research, 2020). In comparison, the results of Study 2 show that SSPs facilitate positive

student–teacher relationships and balance the level of challenge with the students’ level of ability. Additionally, the personal qualities of the SSP teacher (e.g., supportive, caring, interested in the holistic development of the student), in combination with the positive relationships developed through the SSP, meant that the specialist students felt both emotionally and physically safe at school.

The ability of SSPs to facilitate low SES students’ engagement with school is an important finding. Engagement with learning is essential for overcoming the educational disadvantage adolescents face due to their low SES (Parkville Global Advisory, 2014). The improved outcomes of attendance, behaviour, and academic achievement, which were identified in Study 2, increase students’ likelihood of completing secondary school, continuing with further education, and potentially breaking the cycle of disadvantage that currently exists (Department of Education & Training, 2018).

### **The Psychosocial Development of Specialist Students**

The second aim of the thesis was to determine what influence, if any, participation in an SSP had on the psychosocial development of adolescents attending schools located in low SES areas of W.A. Despite previous research showing the potential downsides of SSPs (e.g., Light & Kirk, 2000), the results of Studies 2 and 3 show that SSPs have the potential to positively influence adolescents’ psychosocial development.

#### **Identity.**

Study 3 (the quantitative investigation of the impact of SSPs on adolescents’ psychosocial development) demonstrated that adolescents’ physical self-perceptions (i.e., their sport and condition competence) declined over the period of a year. This result supports and extends the findings of Marsh, Morin, and Parker (2015), who demonstrated a decline in the physical self-perceptions of specialist students attending an elite private school in

Australia. While Marsh et al.'s (2015) investigation only sampled students from one elite private school (pre-dominantly catering for higher SES adolescents), Study 3 provides evidence that the physical self-perceptions of adolescents attending various specialist schools in low SES areas also decline over time.

The decline observed in Study 3 could be due to the improvement in an individual's ability to self-assess, which typically occurs during adolescence (Eccles, Wigfield, Harold, & Blumfield, 1993). Furthermore, once enrolled in an SSP, individuals have a more demanding frame of reference against which to assess themselves (Marsh, Morin, & Parker, 2015). That is, during primary school, these students would have compared themselves to a broad array of classmates and determined that their strength lay in sport/physical activity. However, once starting in an SSP, specialist students are not only more accurate in their self-assessments, but are also comparing themselves to peers who are equally or more talented sports people. Consequently, their physical self-perceptions often start to decline.

Despite this decline, Study 3 demonstrated that specialist students' mean global self-worth remained high and stable over the period of a year. This is a positive finding as previous research shows low SES adolescents are at an increased risk of low self-esteem in comparison to their higher SES peers (McLoyd, Kaplan, Bagley, Hardaway, & Smelts, 2009). Additionally, failure to construct a strong identity can lead to poor self-esteem and has previously been associated with depression and underachievement at school (Sanders, 2013); whereas, a well-established self-concept is essential for optimal psychological functioning in adolescence (Cen & Yao, 2010).

### **Well-being.**

The results of Study 3 also indicated that specialist students' life satisfaction (a measure of hedonic well-being) was higher than the neutral response to the scale, which is

important because previous research has found lower SES adolescents to have lower levels of life satisfaction (Zaborskis, Grincaite, Lenzi, Tesler, Moreno-Maldonado, & Mazur, 2019).

The results of Study 2 may explain the positive influence of SSPs on specialist students' life satisfaction. The specialist students' intrinsic interest in sport was found to be an influential element of the SSP (Study 2). It is thought that because the specialist students enjoyed sport and had the opportunity to play it for a significant amount of time each week, they were more satisfied with their life than they otherwise would have been.

However, Study 3 found specialist students' mean score for their basic psychological need satisfaction (a measure of eudaimonic well-being) was closer to the neutral response in the scale. This finding is important because psychological need satisfaction during adolescence has previously been associated with positive outcomes such as: enhanced engagement, adjustment, motivation, and achievement in school, as well as improved life satisfaction and personal growth (Molinari & Mameli, 2018; Poulou & Norwich, 2019; Reeve & Lee, 2019). The results of Study 2 may explain how SSPs have the potential to influence adolescents' basic psychological needs satisfaction.

Study 2 identified the key elements of the SSPs perceived to positively influence adolescents' developmental outcomes. These elements could influence adolescents' basic psychological needs satisfaction. For example, the voluntary nature of the program provided the specialist students with autonomy to choose to be involved or not; the amount of time spent in the program focused on deliberate practice of the students' sport skill facilitated the student's competence; and the development of positive relationships through the program fulfilled the students' need for relatedness. However, previous research has found intentionality to be a critical factor influencing a program's effectiveness (Bean, Kramers, Forneris, & Camiré, 2018). Intentionality refers to the extent to which the program coordinator/coach makes deliberate decisions to create opportunities to maximise the

athletes' developmental outcomes (Kerrick, 2015; Walker, Marczak, Blyth, & Borden, 2005). Therefore, it is thought that despite the potential of SSPs, the lack of intentionality is impeding their ability to positively influence adolescents' basic psychological needs satisfaction.

Although there has been no previous research examining the influence of SSPs on adolescents' life satisfaction and basic psychological needs satisfaction, participation in sport has previously been positively associated with both life satisfaction (Vilhjalmsson & Thorlindsson, 1992) and basic psychological need satisfaction (Leveresen, Danielsen, Birkeland, & Samdal, 2012). As such, the results of Study 3 extend the findings of previous research to show that SSPs in particular can have a positive influence on adolescents' well-being.

### **Life skills.**

The key stakeholders involved in Study 2 reported that SSPs had a positive influence on adolescents' psychosocial development, specifically with regard to the development of life skills. The life skills perceived to be developed through participation in SSPs included: interpersonal skills, self-management skills, responsibility, and work ethic. This was an important finding because the success of an adolescent's transition to adulthood is dependent on the acquisition of life skills that can be transferred from school to work and from adolescence to adulthood. Consequently, the acquisition of life skills is one of the four main goals of early adolescence (Blum, Astone, Decker, & Mouli, 2014).

Study 3 investigated specialist students' social competence and resilience as specific life skills. Specialist students' mean scores for prosocial behaviours were higher than the neutral response to the scale while their mean score for antisocial behaviours was below the neutral response to the scale. As such, it is thought that the SSP assists specialist students to



develop their social competence, and is important because low SES has previously been found to increase adolescents' risk for difficult peer relations and behaviour problems (McLoyd, Kaplan, Bagley, Hardaway, & Smelts, 2009).

Study 3 also showed that specialist students' mean score for resilience was higher than the neutral response to the scale. Higher levels of resilience are important during adolescence because contextual risks (such as low SES) can reduce an adolescents' capacity to experience positive developmental outcomes (Sanders et al., 2015). An individual's level of resilience depends on the individual and social resources available to them—also known as protective factors (Harms, Brady, Wood, & Silard, 2018). As the specialist students' mean score for resilience was higher than the neutral response to the scale, it is thought that the SSP provides them with a protective context within which to develop.

The results of Study 2 may explain the positive influence of the SSP on adolescents' social competence and resilience. The code of conduct implemented through the SSP explicitly stated what was expected of the specialist students—specifically with regard to their behaviour. Because the specialist students respected their SSP teacher, they internalised the values outlined in this document and behaved accordingly. This suggests that the specialist students' social competence was better than it otherwise would have been without the opportunity to participate in the SSP. Study 2 also highlighted the support specialist students received through the positive relationships developed through the SSP, which is thought to have increased the specialist students' resilience.

Camiré, Trudel, and Bernard (2013) demonstrated that the strength of an SSP in Canada lay in its ability to teach life skills to the adolescents involved. While Camiré et al.'s (2013) investigation only included one school—where the SSP was specifically designed to teach life skills—Study 2 extends our understanding of the influence of SSPs by

demonstrating that SSPs can facilitate the development of adolescents' life skills even if they are not explicitly taught through the program.

There has been no previous research specifically examining adolescents' social competence or resilience in relation to their participation in an SSP, however participation in sport has been positively associated with both social competence (Ullrich-French, McDonough, & Smith, 2012), and resilience (Hjemdal, Friborg, Stiles, Martinussen, & Rosenvinge, 2006). As such, the results of Study 3 extend the findings of previous research to show that SSPs can have a positive influence on adolescents' life skills.

The aim of this research was to increase understanding of the impact of participation in an SSP in order to determine if SSPs are a positive context for adolescent development. To achieve this aim, the educational outcomes as well as the psychosocial development of adolescents attending schools with SSPs in low SES areas of Perth, W.A. were investigated. It was hypothesised that SSPs would be a positive context for adolescent development, and, although not definitive, the results of this research suggest that SSPs can be such a context.

Three theories underlying the current research are: self-determination theory (SDT), the positive youth development (PYD) paradigm, and person–stage–environment fit theory.

The main assumption of SDT (Deci & Ryan, 2008) is that all people possess a natural tendency towards healthy growth and development. However, despite this natural tendency towards growth, proponents of SDT also acknowledge that human development is dependent on socio-environmental conditions (Reeve & Lee, 2019). Similarly, modern PYD approaches focus mainly on adolescents' immediate context, such as their family, peers, and school, as they recognise the influence such contexts can have on development (Rauscher & Cooky, 2016), whereas advocates of the person–stage–environment fit theory assert that optimal

development occurs when there is a good fit between the individual's needs and the opportunities available to them in their social environment (Eccles et al., 1993).

Based upon previous research, it was thought that the low SES of the neighbourhood in which the adolescent lives could thwart their natural tendency towards healthy growth and development, and that a school-based sporting program could be a supportive environment for adolescent development. Specifically, it was thought that the SSP would be a better fit for the specialist students' needs than the traditional classroom context. Therefore, it was hypothesised that despite their attendance at a low SES school, specialist students would experience positive developmental outcomes.

The institutional resources model suggests that it is the "quality, quantity, and diversity of community resources" that mediate the influence of a neighbourhood on adolescent development (Leventhal et al., 2009, p. 421). Schools are important social institutions for adolescents; however, traditional teaching methods often fail to engage students (Shernoff & Csikszentmihalyi, 2009). In comparison, school-based extracurricular activities can promote higher levels of flow (Shernoff & Csikszentmihalyi, 2009), and one way to increase the level of flow students experience at school, and consequently improve the educational engagement of students, is to enhance students' access to school-based extracurricular activities such as sport (Kristjansson, 2012). However, adolescents living in low SES neighbourhoods often have limited access to such programs (Leventhal et al., 2009).

Poulou and Norwich (2019) stated that it is "imperative to identify the protective factors that teachers could manipulate within a school context" so that the needs of at-risk adolescents are met (p. 1). By doing so, teachers could facilitate adolescent adjustment and even prevent the exacerbation of their problems (Poulou & Norwich, 2019). Taken together,

the results of this research suggest that SSPs could be one such modification to conventional education.

### **Implications and Recommendations**

The results of this research have a number of implications for both research and practice. There are often bold claims made about the positive influence of participation in an SSP. For example, the Department of Education in W.A. states that SSPs can “develop character, teach technical skills and self-discipline, and nurture a love of sport ... [and] ... enable children to compete at the highest levels and develop their skills as athletes both on the field and in the classroom” (The Department of Education, 2018, online). However, until now, there has been no research conducted on SSPs in W.A. schools to support this assertion.

The four studies conducted as part of this research have begun to address this gap in the literature by providing much needed data on the developmental outcomes of adolescents attending low SES schools with SSPs in W.A. This research has provided baseline data; however more research is required to truly understand the influence of participation in an SSP on adolescents’ developmental outcomes.

Specifically, it is recommended that research examining a broad range of educational outcomes, such as school attendance rates and secondary school completion rates, be conducted in order to further quantify the findings of Study 2. It is also recommended that research including both specialist and non-specialist students be conducted to ensure valid comparisons are made based on students’ participation in the SSP. Finally, an evaluation of all SSPs, regardless of SES is recommended, so as to determine the influence of the program and identify the influential elements common to all SSPs.

The findings of the current research also have a number of implications for practice. First, the research highlighted the positive influence SSPs can have on the developmental

outcomes of specialist students. This information can be used by specialist sport teachers to advocate for increased and continuing support for SSPs.

Second, the research identified the elements of the SSPs perceived to be influential with regard to specialist students' developmental outcomes. This information can be used by teachers to design their SSPs more intentionally. To this point, it is recommended that teachers are given additional time to develop SSPs, as well as the necessary financial and physical resources to implement the programs. Furthermore, specific teacher training is recommended to ensure SSP teachers can identify the needs of their students and design a program accordingly. Continuing professional development opportunities to improve teachers' skills and knowledge are also recommended.

One of the limitations of the current research is the possibility of self-selection bias. Although all schools with an SSP located in low SES areas of W.A. were invited to participate in the research, only seven schools agreed to do so. It is possible that only those schools in which the SSP teacher was proactive and proud of the program's accomplishments agreed to be involved in the research. There may be other schools with SSPs that have vastly different results, and the participation of only a limited number of schools in the research may highlight a lack of accountability for these programs.

Another limitation of this research is the lack of a comparison group of students, due to the small number of non-specialist students who provided informed consent to participate in Studies 3 and 4. This was despite my best efforts to recruit both specialist and non-specialist students to participate in the research. On reflection, it is thought that the non-specialist students did not perceive any personal benefit to result from their participation in the research. As such, they did not see any point in participating. Whereas, the specialist

students may have perceived the research as a way to demonstrate the value of a program that is personally important to them.

Due to this potential for different perceptions regarding the importance of research, it is important to establish an independent system of evaluation. Therefore, some form of compliance monitoring is recommended to ensure that the implementation of SSPs aligns with the purposes and values of the Department of Education. This does, however, highlight an additional implication; a lack of clarity regarding the purpose of SSPs in W.A. This issue was initially highlighted in a report by Goddard (1995) and to the best of my knowledge is yet to be rectified.

The current research also reinforces the idea that, in education, one size does not fit all. Traditional classroom environments are not conducive to learning for all students. Educators need to consider individual needs and interests so as to fully engage all their students.

For the schools involved in the current research, SSPs provide specialist students with a supportive learning environment. However, this is not an inevitable outcome of implementing an SSP. And, as Darling-Hammond, Flook, Cook-Harvey, Barron, and Osher (2019) explain:

Broader application of this knowledge base cannot be the responsibility of teachers and principals alone. Adequate support and preparation for educators alongside the development of thoughtful curriculum and assessments, as well as sound resource policy based on students' needs is required to achieve these goals at scale. (p. 37)

Accordingly, it is important that policies are developed to ensure the SSPs implemented in all schools are of the highest quality. Acknowledgement of this also requires educators and decision makers to be open to the idea of further developing other specialist programs—whether that be in other sports, or in other curriculum/interest areas.

## **Conclusion**

The purpose of this research was to investigate the educational and psychosocial development of adolescents involved in SSPs located in low SES areas of Perth, W.A. The results of this research suggest SSPs can positively influence adolescents' developmental outcomes. According to the key stakeholders involved in Study 2, SSPs facilitate students' engagement with school, develop students' life skills, and promote positive relationships between the students, as well as between the students and their teachers. Despite a decline observed in physical self-perceptions over time, specialist students' mean grade for Mathematics improved over time and all other psychosocial and educational outcomes remained stable over the period of a year. However, the potential for SSPs to positively influence adolescents' development is thought to be dependent on certain elements of the program that were identified in Study 2.

Notwithstanding the limitations already identified, the research contributes to our existing knowledge of the influence of participation in SSPs. The findings enhance our understanding of the circumstances in which SSPs can influence adolescent development and the type of influence SSPs can have. The key strength of this research is the comprehensive approach taken to investigate the influence of SSPs. Namely, a longitudinal design using both qualitative and quantitative methods, sampling participants from multiple schools and taking into account multiple perspectives. This research will therefore serve as a base for future studies of adolescent development in relation to participation in youth sport and school-based programs.

As Cantor et al. (2018) explained, "There is no single 'ideal' developmental pathway for everyone; instead there are multiple pathways to healthy development, learning, academic success and resilience" (p. 315); the Specialist Sport Programs are one of those possibilities.

In this sense, the results of the research clearly signpost the potential of specialist programs to facilitate positive development for the adolescents involved.



## APPENDICES

## Appendix A: Letter of Approval—ECU

**Subject:** Project 9910 O'HARA ethics approval  
**Date:** Tuesday, 13 May 2014 at 9:34:14 am Australian Western Standard Time  
**From:** Research Ethics  
**To:** Eibhlish O'HARA [REDACTED]  
**CC:** Craig HARMS, Fadi MA'AYAH, Craig SPEELMAN, Research Assessments, FHES Student Information Office  
**Attachments:** Conditions of approval.pdf

Dear Eibhlish

**Project 9910 O'HARA**

**Project Name - An Investigation of the Psychosocial and Educational Outcomes Associated with Low SES Adolescents' Participation in Specialised School Sports Programs**

**Student Number:** [REDACTED]

The ECU Human Research Ethics Committee (HREC) has reviewed your application and has granted ethics approval for your research project. In granting approval, the HREC has determined that the research project meets the requirements of the *National Statement on Ethical Conduct in Human Research*.

The approval period is from 13 May 2014 to 14 December 2016.

The Research Assessments Team has been informed and they will issue formal notification of approval. Please note that the submission and approval of your research proposal is a separate process to obtaining ethics approval and that no recruitment of participants and/or data collection can commence until formal notification of both ethics approval and approval of your research proposal has been received.

All research projects are approved subject to general conditions of approval. Please see the attached document for details of these conditions, which include monitoring requirements, changes to the project and extension of ethics approval.

Please feel free to contact me if you require any further information.

Regards  
Kim

**Kim Gifkins, Research Ethics Officer**, Office of Research & Innovation, Edith Cowan University, 270 Joondalup Drive, Joondalup, WA 6027  
Email: [research.ethics@ecu.edu.au](mailto:research.ethics@ecu.edu.au) Tel: [REDACTED] Fax: +61 08 6304 5044 | CRICOS IPC 00279B

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This e-mail is confidential. If you are not the intended recipient you must not disclose or use the information contained within. If you have received it in error please return it to the sender via reply e-mail and delete any record of it from your system. The information contained within is not the opinion of Edith Cowan University in general and the University accepts no liability for the accuracy of the information provided.

CRICOS IPC 00279B

## Appendix B: Letter of Approval—Department of Education



Government of Western Australia  
Department of Education

Your ref :  
Our ref :  
Enquiries :

Ms Eibhlise O'Hara

Dear Ms O'Hara

Thank you for your application received 8 April 2014 to conduct research on Department of Education sites.

The focus and outcomes of your research project, *An Investigation of the Psychosocial and Educational Outcomes Associated with Low SES Adolescent's Participation in Specialised School Sports Programs*, are of interest to the Department. I give permission for you to approach principals to invite their participation in the project as outlined in your application and subsequent email correspondence. It is a condition of approval, however, that upon conclusion the results of this study are forwarded to the Department at the email address below.

Consistent with Department policy, participation in your research project will be the decision of the schools invited to participate, individual staff members, the children in those schools and their parents. A copy of this letter must be provided to principals when requesting their participation in the research. Researchers are required to sign a confidential declaration and provide a current Working with Children Check upon arrival at Department of Education schools.

Responsibility for quality control of ethics and methodology of the proposed research resides with the institution supervising the research. The Department notes a copy of a letter confirming that you have received ethical approval of your research protocol from the Edith Cowan University Human Research Ethics Committee.

Any proposed changes to the research project will need to be submitted for Department approval prior to implementation.

Please contact Dr Adriaan Wolvaardt, Research and Evaluation Officer, on [redacted] or [researchandpolicy@education.wa.edu.au](mailto:researchandpolicy@education.wa.edu.au) if you have further enquiries.

Very best wishes for the successful completion of your project.

Yours sincerely

[redacted signature]

ALAN DODSON  
DIRECTOR  
EVALUATION AND ACCOUNTABILITY

14 August 2014

151 Royal Street, East Perth Western Australia 6004

## Appendix C: Letter of Approval—Catholic Education Office

11 June 2014

Ms Eibhlish O'Hara

Dear Ms O'Hara

**RE: AN INVESTIGATION OF THE PSYCHOSOCIAL AND EDUCATIONAL OUTCOMES  
ASSOCIATED WITH LOW SES ADOLESCENTS PARTICIPATION IN SPECIALISED  
SCHOOL SPORTS PROGRAMS**

Thank you for your completed application received 14 May 2014, whereby the first phase of the investigation will examine the effect of adolescents' involvement in the program through the online administration of a range of scales. The second phase of the investigation will involve conducting semi-structured interviews with students, parents and teachers in order to illuminate their lived experiences.

I give in principle support for the selected secondary Catholic schools in Western Australia to participate in this valuable study. However, consistent with CEOWA policy, participation in your research project will be the decision of the individual principal and staff members.

Responsibility for quality control of ethics and methodology of the proposed research resides with the institution supervising the research. The CEOWA notes that Edith Cowan University Human Research Ethics Committee has granted permission for this research project until 14 December 2016 (Project Number: 9910).

Any changes to the proposed methodology will need to be submitted for CEOWA approval prior to implementation. The focus and outcomes of your research project are of interest to the CEOWA. It is therefore a condition of approval that the research findings of this study are forwarded to the CEOWA.

Further enquiries may be directed to Jane Gostelow at [REDACTED] or [REDACTED]

I wish you all the best with your research.

Yours sincerely

Dr Tim McDonald

## Appendix D: Information Letter and Consent Form—Principal

Dear Principal,

My name is Eibhlish O'Hara and I am conducting research into adolescent's participation in specialist school sports programs as part of my PhD in Psychology at Edith Cowan University. The aim of the proposed study is to determine if participation in such programs can increase the likelihood of achieving positive psychosocial and educational outcomes. The Edith Cowan University Human Research Ethics Committee and the Department of Education have approved this research project and your school's participation would be greatly appreciated.

There are two main phases of my investigation. Firstly, I would like to conduct one-on-one interviews with some of the adolescents at your school, their parents, and also the teachers of the specialist school sports program. The purpose of which would be to determine the benefits and challenges associated with participation. These interviews are not expected to take more than an hour each and I would like to conduct these in a quiet room at your school.

The second phase of my investigation involves administering an online survey to both participants and non-participants of the specialist school sports program in years 9 and 10. This survey will examine the students' identity formation, psychological need satisfaction, attachment style, well-being, social competence and academic achievement. As I am looking to target a large number of students in this second phase of the study, I request your permission to use a passive consent process. That is, if you consent for the students in your school to be involved, any student who is in year 9 and 10 who is present at school on the day of the survey will be involved. This will eliminate the need to send out and await the return of consent forms for each individual student.

Your school's involvement in this research project is completely voluntary. If you are happy for your school to participate in this project, I ask that you complete the consent form attached and return it to me. If you have any questions regarding the project you can contact myself, or my supervisors on the phone numbers (or email) provided below. Alternatively, if you wish to speak with someone independent of this project you can contact Ms Kim Gifkins, from the Research Ethics Office on the phone number provided below.

Thank you for taking the time to read this letter,  
Yours sincerely,

Eibhlish O'Hara

Phone: [REDACTED]

Email: [REDACTED]

Supervisors:

Professor Craig Speelman

Phone: [REDACTED]

Email: [REDACTED]

Dr. Craig Harms

Phone: [REDACTED]

Email: [REDACTED]

Dr. Fadi Ma'ayah

Phone: [REDACTED]

Email: [REDACTED]

Research Ethics Office:

Ms Kim Gifkins

270 Joondalup Drive,  
JOONDALUP, 6027

Phone: [REDACTED]

Fax: 6304 2661

Email: research.ethics@ecu.edu.au

**Title of the Project: An Investigation of the Psychosocial and Educational Outcomes Associated with Low SES Adolescents' Participation in Specialist Sports Programs**

- I have had the opportunity to ask questions about the research project and I am satisfied with the answers I received.
- I understand that I can contact the supervisors of this project or the research ethics office at Edith Cowan University if I have any further queries, concerns or complaints.
- I give permission for the data collected to be used by the researcher for the process of completing a Doctor of Philosophy (Psychology) degree and I understand that it may be published.
- I give permission for the researcher to invite students, parents, and teachers at this school to participate in the study.
- I understand that the students, parents and teachers can withdraw their consent to participate in the research project at any time.
- I give permission for school time to be used to complete the online survey and student interviews.
- I give permission for a passive consent process to be used for the second phase of the investigation.
- I understand that all information collected for this research project will be kept confidential and the identity of the participants in the research project will not be disclosed without their consent.
- I understand that the school can withdraw its consent to participate in the research project at any time without explanation or penalty.
- I understand that the school can also chose to have their data removed from the research project at any time.

Principal's Name: \_\_\_\_\_

Principal's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

School: \_\_\_\_\_

## Appendix E: Information Letter and Consent Form—Teacher

Dear Teachers,

My name is Eibhlis O'Hara and I am conducting research into adolescent's participation in specialist school sports programs as part of my PhD in Psychology at Edith Cowan University. The aim of the proposed study is to determine if participation in a specialist school sports program will increase the likelihood of achieving positive psychosocial and educational outcomes. The Edith Cowan University Human Research Ethics Committee and the Department of Education have approved this research project and your school's participation would be greatly appreciated.

To conduct this research study, I will be collecting data from an online survey which will determine if there is a difference between adolescent's psychosocial and educational outcomes depending on their participation in the program. As such, I will require both participants and non-participants of the specialist school sports program to be involved in this study. This survey will measure students' identity formation, psychological needs satisfaction, attachment style, well-being, social competence and academic achievement. In order to do so, I request your assistance in arranging an appropriate time for the students to complete this survey.

I will also be conducting one-on-one interviews with some of the students who participate in the programs, and their parents, to determine what they believe to be the benefits and challenges associated with participation in the program. I believe that as teachers of this program, you too could offer valuable insights into the influence of participation for the adolescents involved. As such, I would like to conduct a one-on-one interview with you. These interviews are not expected to take more than an hour and your involvement in this research is completely voluntary. If you are happy to participate in this project, I ask that you complete the consent form attached and return it to me.

If you have any questions regarding the project you can contact myself, or my supervisors on the phone numbers (or email) provided below. Alternatively, if you wish to speak with someone independent of this project you can contact Ms Kim Gifkins, from the Research Ethics Office on the phone number provided below.

Thank you for taking the time to read this letter,  
Yours sincerely,

Eibhlis O'Hara

Phone: [REDACTED]

Email: [REDACTED]

Supervisors:

Professor Craig Speelman

Phone: [REDACTED]

Email: [REDACTED]

Dr. Craig Harms

Phone: [REDACTED]

Email: [REDACTED]

Dr. Fadi Ma'ayah

Phone: [REDACTED]

Email: [REDACTED]

Research Ethics Office:

Ms Kim Gifkins

270 Joondalup Drive,  
JOONDALUP, 6027

Phone: [REDACTED]

Fax: 6304 2661

Email: [research.ethics@ecu.edu](mailto:research.ethics@ecu.edu).

**Title of the Project: An Investigation of the Psychosocial and Educational Outcomes Associated with Low SES Adolescents' Participation in Specialist Sports Programs**

- I have had the opportunity to ask questions about the research project and I am satisfied with the answers I received.
- I understand that I can contact the supervisors of this project or the research ethics office at Edith Cowan University if I have any further queries, concerns or complaints.
- I give permission for the data collected to be used by the researcher for the process of completing a Doctor of Philosophy (Psychology) degree and I understand that it may be published.
- I agree to participate in a one-on-one interview as part of the research project.
- I understand that the interview will be recorded and that once the study is complete the recording will be deleted.
- I understand that all information collected for this research project will be kept confidential and that my identity will not be disclosed without my consent.
- I understand that I can withdraw my consent at any time without explanation or penalty.
- I understand that I can also choose to have my data removed from the research project at any time.

Teacher's Name: \_\_\_\_\_

Teacher's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

School: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_



## Appendix F: Information Letter and Consent Form—Families

Dear Students, Parents and Guardians,

My name is Eibhlish O'Hara and I am conducting research into adolescent's participation in specialist school sports programs as part of my PhD in Psychology at Edith Cowan University. The aim of the proposed study is to determine if participation in a specialist school sports program will increase the likelihood of achieving positive psychosocial and educational outcomes. The Edith Cowan University Human Research Ethics Committee and the Department of Education have approved this research project and your school's participation would be greatly appreciated.

As part of this investigation, I would like to interview students who participate in the specialist school sports program and their parent/guardian (separately). The purpose of which is to determine the benefits and challenges associated with participation in the specialist school sports program. These interviews are not expected to take more than an hour each.

Students (and parents) involvement in this research project is completely voluntary. If you, and your child, are happy to participate in this project, I ask that you complete the consent form attached and return it to me. If you have any questions regarding the project you can contact myself, or my supervisors on the phone numbers (or email) provided below. Alternatively, if you wish to speak with someone independent of this project you can contact Ms Kim Gifkins, from the Research Ethics Office on the phone number provided below.

Thank you for taking the time to read this letter,  
Yours sincerely,

Eibhlish O'Hara

Phone: [REDACTED]

Email: [REDACTED]

Supervisors:

Professor Craig Speelman

Phone: [REDACTED]

Email: [REDACTED]

Dr. Craig Harms

Phone: [REDACTED]

Email: [REDACTED]

Dr. Fadi Ma'ayah

Phone: [REDACTED]

Email: [REDACTED]

Research Ethics Office:

Ms Kim Gifkins

270 Joondalup Drive,

JOONDALUP, 6027

Phone: [REDACTED]

Fax: 6304 2661

Email: [research.ethics@ecu.edu.au](mailto:research.ethics@ecu.edu.au)

**Title of the Project: An Investigation of the Psychosocial and Educational Outcomes Associated with Low SES Adolescents' Participation in Specialist Sports Programs**

Student's name: \_\_\_\_\_ School: \_\_\_\_\_

- I have had the opportunity to ask questions about the research project and I am satisfied with the answers I received.
- I understand that I can contact the supervisors of this project or the research ethics office at Edith Cowan University if I have any further queries, concerns or complaints.
- I give permission for the data collected to be used by the researcher for the process of completing a Doctor of Philosophy (Psychology) degree and I understand that it may be published.
- I agree to participate in an interview with the researcher at the school, during school hours, that will be recorded.
- I understand that the interview recordings will be deleted once the investigation is complete and all my information will be kept confidential.
- I understand that I can withdraw my consent at any time without explanation or penalty and that I can have my data removed from the study at any time.

Student's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Parent/Guardian signature: \_\_\_\_\_ Date: \_\_\_\_\_

Parent's name: \_\_\_\_\_

- I have had the opportunity to ask questions about the research project and I am satisfied with the answers I received.
- I understand that I can contact the supervisors of this project or the research ethics office at Edith Cowan University if I have any further queries, concerns or complaints.
- I give permission for the data collected to be used by the researcher for the process of completing a Doctor of Philosophy (Psychology) degree and I understand that it may be published.
- I agree to participate in a one-on-one interview that will be recorded, as part of the research project.
- I understand that the interview recordings will be deleted once the investigation is complete and all my information will be kept confidential.
- I understand that I can withdraw my consent at any time without explanation or penalty and that I can have my data removed from the study at any time.

Parent's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

## Appendix G: Information Letter and Consent Form—Graduates

Dear Graduates of the specialist school sports program at *[Insert name of school here]*,

My name is Eibhlish O'Hara and I am conducting research into adolescent's participation in specialist school sports programs as part of my PhD in Psychology at Edith Cowan University. The aim of the proposed study is to determine if participation in such programs can increase the likelihood of achieving positive psychosocial and educational outcomes. The Edith Cowan University Human Research Ethics Committee and the Department of Education have approved this research project and your participation would be greatly appreciated.

For this research study I will be conducting interviews with current participants in the specialist sports program, their parents and their teachers. I would also like to interview people who have previously participated in these programs, such as yourself, to determine what you believe to be the benefits and challenges associated with participation. As graduates of this program I believe you can offer valuable insights into the influence of participation. As such, I would like to conduct a one-on-one interview with you.

These interviews are not expected to take more than an hour each and your involvement in this research project is completely voluntary. If you are happy to participate in this project, I ask that you complete the consent form attached and return it to me so that we can arrange an appropriate time and place to conduct the interview. If you have any questions regarding the project you can contact myself, or my supervisors on the phone numbers (or email) provided below. Alternatively, if you wish to speak with someone independent of this project you can contact Ms Kim Gifkins, from the Research Ethics Office on the phone number provided below.

Thank you for taking the time to read this letter,

Yours sincerely,

Eibhlish O'Hara

Phone: [REDACTED]

Email: [REDACTED]

Supervisors:

Professor Craig Speelman

Phone: [REDACTED]

Email: [REDACTED]

Dr. Craig Harms

Phone: [REDACTED]

Email: [REDACTED]

Dr. Fadi Ma'ayah

Phone: [REDACTED]

Email: [REDACTED]

Research Ethics Office:

Ms Kim Gifkins

270 Joondalup Drive,

JOONDALUP, 6027

Phone: [REDACTED]

Fax: [REDACTED] Email: [REDACTED]

**Title of the Project: An Investigation of the Psychosocial and Educational Outcomes Associated with Low SES Adolescents' Participation in Specialist Sports Programs**

- I have had the opportunity to ask questions about the research project and I am satisfied with the answers I received.
- I understand that I can contact the supervisors of this project or the research ethics office at Edith Cowan University if I have any further queries, concerns or complaints.
- I give permission for the data collected to be used by the researcher for the process of completing a Doctor of Philosophy (Psychology) degree and I understand that it may be published.
- I agree to participate in a one-on-one interview that will be recorded, and I understand that once the study is completed, the recordings will be deleted.
- I understand that I can withdraw my consent at any time without explanation or penalty.
- I understand that all information collected for this research project will be kept confidential and that my identity will not be disclosed without my consent.
- I understand that I can also choose to have my data removed from the research project at any time.

Graduate's Name: \_\_\_\_\_

Graduate's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Contact phone or email: \_\_\_\_\_

## Appendix H: Interview Schedule—Teacher

CONTEXTUAL	
School	<p>Can you describe this school to me?</p> <p>In general, would you consider it to be a good place to be? Why?</p> <p>Could you describe to me the main things that happen during the school year?</p> <p>Could you describe a typical day at this school?</p>
Specialist Sports Program	<p>What can you tell me about the specialist program?</p> <p>What is required of you?</p> <p>Why did you become involved?</p> <p>How do students become involved?</p> <p>What is required of students?</p> <ul style="list-style-type: none"> <li>• Training</li> <li>• Games</li> <li>• Time Commitment</li> <li>• Balancing all of your commitments</li> </ul> <p>Can you think of any other activities that the students do as members of the sports team?</p> <p>Can you describe to me the ways in which school life is different for students who are on the team with those who are not on the team?</p> <p>I'd like to create a list of the benefits of being involved in the program – can you tell me what you think the benefits are? (skills learnt, relationships formed, development generally)</p> <p>Why would you encourage students to become involved in the program?</p> <p>What about the challenges?</p> <p>Have you managed to find ways to assist students to overcome these challenges?</p> <p>Do you think the program has influenced the school's culture? In a positive or negative way?</p> <p>*** Can you show me around the school's sporting facilities?</p>
RELATIONSHIPS	
Students	<p>Can you tell me about the students you teach / coach?</p> <p>How would you describe them?</p> <p>Are your students developing into the kind of people you would like them to be? In what way?</p> <p>What do you expect of your students?</p> <p>Do you get along equally well with students who are not in the program as you do with those in the program?</p>
School Staff	<p>What can you tell me about the other teachers at this school?</p> <p>Do they support the program?</p>

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Parents

What can you tell me about the parents of the school in general?

Do you think they are supportive of the work you do with the students?

What about the parents of the students who are involved in the program?

How do they show their support for the team?

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## Appendix I: Interview Schedule—Parent

INDIVIDUAL	
About their child	<p>Can you tell me about your child?</p> <p>How would you describe them to other people?</p> <p>Are they developing into the kind of person you would like them to be? In what way?</p> <p>What are your expectations / aspirations for their future?</p> <p>Does your child have the same aspirations?</p>
CONTEXTUAL	
School	<p>Can you describe your child's school to me?</p> <p>In general, do you consider it to be a good place to be? Why?</p> <p>Could you describe to me the main things that happen during the school year?</p> <p>What school activities do you like your child to be involved in?</p>
Specialist Sports Program	<p>What can you tell me about the specialist program?</p> <ul style="list-style-type: none"> <li>• Training</li> <li>• Games</li> <li>• Time Commitment</li> <li>• Balancing school and sport and work and other family commitments</li> </ul> <p>Are you involved in the specialist program in any way yourself?</p> <p>What do you do? Why?</p> <p>Did you encourage your child to apply to be in the program / to participate?</p> <p>Why?</p> <p>I'd like to create a list of the benefits associated with your child's participation in the program – can you tell me what you think the benefits for your child are? (Skills learnt, relationships formed development in general)</p> <p>What about the challenges? Have you, or your child, experienced any challenges in regards to their involvement in the program?</p> <p>Have you managed to find a way to overcome these challenges? How do you overcome such challenges?</p> <p>Do you think the program has helped your child to grow / develop new skills?</p>
RELATIONSHIPS	
Family	<p>Can you tell me about your family? For example, the name of each of your children and what they are like.</p> <p>Do they all get along?</p> <p>Does everyone in the family support your child's participation in the program?</p>

Peers	<p>I'd like to know about your child's peer group.</p> <p>Can you tell me about each of your child's friends? Are they on the team as well?</p> <p>Does your child get along well with students who are not on the team?</p>
School Staff	<p>What can you tell me about your child's coach? How would you describe him or her?</p> <p>Do you and your child get along well with your child's coach?</p> <p>Do you think they are only focused on your child's participation in the program or do you think they care about other aspects of their school life as well?</p> <p>What about other teachers at the school? Do you or your child have any favourites? Why do you / your child like this teacher?</p>



## Appendix J: Interview Schedule—Student

INDIVIDUAL	
Self	<p>Can you tell me about yourself?</p> <p>How would you describe yourself to other people?</p> <p>What do you like to do in your spare time?</p> <p>Would you say you a good student? Why?</p> <p>Would you say that you are the kind of person you would like to be? In what way?</p> <p>What are your expectations for the future? For example, once you finish school? (education / employment / relationships)</p> <p>Would you be happy if these things occurred? Or do you have other aspirations for the future? For example: If anything was possible then I would like ____ to happen.</p> <p>What are all the different groups you belong to?</p>
CONTEXTUAL	
School	<p>Can you describe your school to me?</p> <p>In general, would you consider it to be a good place to be? Why?</p> <p>Could you describe to me the main things that happen during the school year?</p> <p>Could you describe a typical day at school?</p> <p>What school activities do you like the best? easiest? most challenging?</p>
Specialist Sports Program	<p>What can you tell me about the specialist program?</p> <p>What is required of you?</p> <p>How do you become involved?</p> <ul style="list-style-type: none"> <li>• Training – What happens at a typical training session?</li> <li>• Games – What happens at a typical game?</li> <li>• Time Commitment</li> <li>• Balancing School and Sport and free time</li> </ul> <p>Can you think of any other activities that you do as a member of the sports team?</p> <p>Can you describe to me the ways in which school life is different for students who are on the team with those who are not on the team?</p> <p>Why did you apply to be a part of the program? Why did you want to be involved in this program?</p> <p>Do you still feel that way now?</p> <p>Could you describe to me the main things that happen when you join the team?</p> <p>If someone was to tell you that they were thinking of applying to join the program, what would you say to them?</p> <p>Would you encourage them or discourage them? Why is that?</p> <p>What would be the most memorable experience of being on the team?</p>

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I'd like to create a list of the benefits of being involved in the program – can you tell me what you think the benefits are? (skills learnt, relationships formed)

What about the challenges? Have you experienced any challenges in regards to being involved in the program?

Have you managed to find a way to overcome these challenges? How do you overcome such challenges?

Do you think the program has helped you to grow / develop new skills?

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#### RELATIONSHIPS

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Family Can you tell me about your immediate family? For example, the name of each of your relatives and what they are like.

- Parents
- Siblings
- Anyone else considered to be part of the family

Do you get along well with your family members?

Do they support your participation in the specialist sports program? How do you know?

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Peers I'd like to know about your peer group.

Can you tell me about each of your friends?  
Do they all play as well?

Are there different groups of students here at \_\_ *[insert name of school here]*\_\_?

What can you tell me about your classmates?

Do you get along well with students who are not in the program?

What would it be like if you were placed in a situation where you had to do a group assignment with students who were not on the team?

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School Staff What can you tell me about your coach? How would you describe him or her?

Do you get along well with your coach?

Do you think they are only focused on your participation in the program or do you think they care about other aspects of your schooling as well?

What can you tell me about the other teachers at your school? Do you have any favourites? Why are they your favourite?

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General Thinking back to everyone we have talked about so far – your family, peer group and teachers:

- Are they supportive of your participation in the program? How do you know / How do they show this?
  - Would you say that in general they all get along well? For example, do your parents think your friends are a good group to spend your time with? Is the
-

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interaction between your parents and your teachers mostly positive or can they be negative at times as well?

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## Appendix K: Interview Schedule—Graduate

INDIVIDUAL	
Self	<p>Can you tell me about yourself?</p> <p>How would you describe yourself to other people?</p> <p>Would you say that you are the kind of person you would like to be? In what way?</p> <p>When you were in high school, what were your expectations / aspirations for the future? How did these change as you grew up? Have you achieved the things you wanted to achieve?</p>
CONTEXTUAL	
School	<p>Can you describe your school to me?</p> <p>Do you think it was a good place to be? Why?</p> <p>Could you describe a typical day at school?</p> <p>What school activities did you like the best? were the easiest? were the most challenging?</p>
Specialist Sports Program	<p>What can you tell me about the specialist program?</p> <ul style="list-style-type: none"> <li>• Training</li> <li>• Games</li> <li>• Time Commitment</li> <li>• Balancing School and Sport and free time</li> </ul> <p>Can you think of any other activities that you did as a member of the sports team?</p> <p>Why did you apply to be a part of the program?</p> <p>If someone was to tell you that they were thinking of applying to join the program, what would you say to them? Would you encourage or discourage them? Why is that?</p> <p>What would be the most memorable experience of being on the team?</p> <p>I'd like to create a list of the benefits of being involved in the program – can you tell me what you think the benefits are? (skills learnt, relationships formed, development in general)</p> <p>What about the challenges? Did you experience any challenges in regards to being involved in the program? How did you overcome such challenges?</p> <p>Do you think the program helped you to grow / develop new skills?</p>
RELATIONSHIPS	
Family	<p>Can you tell me about your family? For example, the name of each of your relatives and what they are like.</p>

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	<ul style="list-style-type: none"> <li>• Parents</li> <li>• Siblings</li> <li>• Anyone else considered to be part of the family</li> </ul> <p>Do you get along well with your family members?</p> <p>Were your siblings involved in the program?</p> <p>Were your siblings supportive of your participation in the program? How do you know?</p>
Peers	<p>I'd like to know about your peer group.</p> <p>Can you tell me about the friends you had in high school? Did they all play as well?</p> <p>Were there different groups of students at ____ <i>[insert name of school here]</i> ____?</p> <p>Did you get along well with students who were not in the program?</p> <p>What would it have been like if you were placed in a situation where you had to do a group assignment with students who were not on the team?</p> <p>Have you stayed in contact with the team? What about other students from your school? Why / why not?</p>
School Staff	<p>What can you tell me about your coach? How would you describe him or her?</p> <p>Did you get along well with your coach?</p> <p>Do you think they were only focused on your participation in the program or do you think they cared about other aspects of your schooling as well?</p> <p>What can you tell me about the other teachers at your school? Did you have any favourites?</p>
General	<p>Thinking back to everyone we have talked about so far – your family, peer group and teachers:</p> <ul style="list-style-type: none"> <li>• Were they supportive of your participation in the program? How do you know / how did they show this?</li> <li>• Would you say that in general they all got along well? For example, did your parents think your friends were a good group to spend your time with? Were the interactions between your parents and your teachers mostly positive or could they be negative at times as well?</li> </ul>

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## **Appendix L: Sample Code of Conduct Implemented at One of the SSPs Involved in the Research**

Appendix L is not available in this version of the thesis

## Appendix M: Psychosocial Data for Comparison Students

Table 8

### *Physical Self-Perception Data for Comparison Students*

ID	Sport competence		Condition competence		Attractive body adequacy		Strength competence		Physical self-worth		Global self-worth	
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
1	2.00	1.83	1.00	1.50	1.00	1.83	4.00	3.00	1.33	2.50	2.67	3.17
2	1.50	1.83	1.67	1.67	1.33	2.00	1.33	1.67	2.00	2.50	1.83	3.00
3	3.33	3.83	3.33	3.83	3.00	2.83	3.50	3.33	3.00	3.17	3.00	3.00
4	3.17	3.33	2.83	3.67	3.67	3.83	3.33	3.00	4.00	4.00	4.00	4.00
5	3.17	3.83	2.17	2.83	2.00	1.33	2.83	2.33	2.50	3.00	3.33	3.83
6	2.83	3.00	2.00	1.67	1.50	1.83	3.33	2.83	1.50	1.83	2.33	3.17
7	2.17	1.67	2.83	2.50	2.50	2.33	2.00	1.83	3.00	3.00	3.50	3.17
8	1.17	2.17	1.33	1.17	1.33	1.00	2.67	3.00	1.17	1.00	2.33	1.67
Average	2.42	2.69	2.15	2.35	2.04	2.13	2.88	2.63	2.31	2.63	2.88	3.13

Table 9

*Basic Psychological Needs Satisfaction Data for Comparison Students*

ID	Autonomy		Competence		Relatedness	
	2014	2015	2014	2015	2014	2015
1	5.43	5.86	6.17	5.67	5.25	3.63
2	5.57	5.57	5.50	5.33	7.00	6.75
3	3.57	4.29	4.17	4.67	4.25	6.00
4	5.14	4.71	5.00	4.17	5.88	5.13
5	5.71	4.86	5.00	5.50	6.13	6.13
6	4.29	4.00	4.50	4.67	5.13	4.63
7	6.00	5.29	6.83	5.83	6.75	6.25
8	5.43	4.71	5.17	5.33	5.63	6.00
Average	5.14	4.91	5.29	5.15	5.75	5.56



Table 10

*Life Satisfaction Data for Comparison Students*

ID	Life Satisfaction	
	2014	2015
1	29	30
2	40	38
3	25	17
4	36	35
5	33	32
6	29	35
7	32	33
8	40	36
Average	33	32

Table 11

*Social Competence Data for Comparison Students*

ID	Positive		Negative	
	2014	2015	2014	2015
1	49	35	52	60
2	60	57	47	58
3	84	104	31	32
4	95	93	48	43
5	80	85	85	80
6	71	55	42	50
7	91	104	30	31
8	100	111	29	31
Average	78.75	80.50	45.50	48.13

Table 12

*Resilience Data for Comparison Students*

ID	Personal Competence		Social Competence		Structured Style		Social Resources		Family Cohesion		Overall Resilience	
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
1	32	30	19	18	16	14	18	21	22	21	107	104
2	35	32	21	22	12	13	24	24	29	29	121	120
3	20	20	17	15	9	8	17	9	12	8	75	60
4	35	32	22	20	19	16	23	20	25	24	124	112
5	28	33	17	19	15	15	21	20	24	25	105	112
6	21	24	11	15	6	11	16	15	17	18	71	83
7	25	36	17	22	10	14	22	23	22	24	96	119
8	32	31	17	18	15	12	22	21	25	25	111	107
Average	28.50	29.75	17.63	18.63	12.75	12.88	20.38	19.13	22.00	21.75	101.25	102.13

## Appendix N: Educational Data for Comparison Students

Table 13

### *Academic Performance of Comparison Students*

ID	English		Math		Science		S&E		HPE	
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
1	5	5	4	4	5	4	5	5	4	3
2	4	3	5	4	5	5	4	4	4	4
3	3	3	5	4	5	4	4	3	4	4
4	3	4	4	5	5	4	3	4	3	5
5	5	3	5	5	4	5	4	4	3	3
6	4	3	5	5	5	4	5	4	4	4
7	3	4	4	5	4	4	4	4	4	4
8	3	3	5	3	4	3	5	3	3	3
9	4	3	5	5	5	5	4	4	5	4
10	4	3	2	3	4	4	3	3	3	3
11	4	4	4	4	5	5	4	5	3	4
12	5	4	5	5	5	5	4	4	3	5
13	5	5	5	5	5	5	5	5	5	4
14	4	5	3	3	5	5	3	5	4	5
15	3	3	3	2	3	2	3	3	4	5
16	4	4	3	3	4	4	3	4	4	4

ID	English		Math		Science		S&E		HPE	
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
17	3	3	2	2	3	2	3	3	3	3
18	3	3	4	3	5	4	4	3	3	3
19	3	3	3	4	3	4	3	3	4	5
20	4	3	3	3	3	2	4	5	2	2
21	3	4	4	3	2	4	4	4	2	2
22	3	2	4	4	3	2	4	3	1	1
23	3	3	3	2	4	2	3	4	2	2
24	2	3	3	2	3	2	4	3	2	2
25	1	1	1	1	1	1	3	3	1	1
Average	3.52	3.36	3.76	3.56	4.00	3.64	3.80	3.80	3.20	3.40

Table 14

*School Engagement Data for Comparison Students*

ID	Aspirations		Productivity		Belonging		Overall Engagement	
	2014	2015	2014	2015	2014	2015	2014	2015
1	8.50	6.00	8.50	7.50	8.33	6.83	8.45	7.05
2	6.00	5.00	7.08	6.67	7.00	6.50	6.86	6.32
3	10.00	9.25	8.67	9.17	8.00	8.17	8.73	8.91
4	9.50	8.25	9.33	8.75	9.50	9.33	9.41	8.82
5	8.25	8.50	9.00	9.00	9.00	9.00	8.86	8.91
6	6.75	7.50	7.42	6.25	6.83	8.50	7.14	7.09
7	7.00	7.00	8.42	7.67	8.00	8.00	8.05	7.64
8	9.00	7.75	9.17	8.25	8.33	7.17	8.91	7.86
9	8.50	8.75	9.25	9.50	9.67	9.33	9.23	9.32
Average	8.17	7.56	8.54	8.08	8.30	8.09	8.40	7.99

## References

- American Institutes for Research. (2020). *Environment*. Safe Supportive Learning.  
[https://doi.org/10.1016/0002-8223\(93\)92057-5](https://doi.org/10.1016/0002-8223(93)92057-5)
- American Institutes for Research. (2020). *School Climate*. Safe Supportive Learning.  
[https://doi.org/10.1007/978-1-4419-1695-2\\_223](https://doi.org/10.1007/978-1-4419-1695-2_223)
- American Institutes for Research. (2020). *Safety*. Safe Supportive Learning.  
<https://safesupportivelearning.ed.gov/topic-research/safety>
- American Institutes for Research. (2020). *Physical Safety*. Safe Supportive Learning.  
<https://safesupportivelearning.ed.gov/topic-research/safety/physical-safety>
- American Institutes for Research. (2020). *Emotional Safety*. Safe Supportive Learning.  
<https://doi.org/10.4324/9780203961544>
- American Institutes for Research. (2020). *Engagement*. Safe Supportive Learning.  
<https://safesupportivelearning.ed.gov/topic-research/engagement>
- American Psychological Association. (2002). *Developing adolescents: A resource for professionals* (pp. 1–47).
- Anderson, S., Johnston, W., & Leventhal, T. (2019). When neighborhoods matter: Developmental timing and youth reading achievement and problem behaviors. *Social Science Research*, 81, 1–11. <https://doi.org/10.1016/j.ssresearch.2019.02.010>
- Archambault, I., Janosz, M., Fallu, J.-S., & Pagani, L. S. (2009). Student engagement and its relationship with early high school dropout. *Journal of Adolescence*, 32(3), 651–670.  
<https://doi.org/10.1016/j.adolescence.2008.06.007>
- Ash, C., & Huebner, S. (2001). Environmental events and life satisfaction reports of adolescents: A test of cognitive mediation. *School Psychology International*, 22(3), 320–336.
- Australian Bureau of Statistics (ABS). (2011). *Measures of socioeconomic status*, cat. no. 1244 .0.55.001
- Australian Curriculum, Assessment and Reporting Authority (ACARA). (2013). *Guide to understanding 2012 Index of community socio-educational advantage (ICSEA) values*.

[http://www.acara.edu.au/verve/resources/Guide\\_to\\_understanding\\_2012\\_ICSEA\\_values.pdf](http://www.acara.edu.au/verve/resources/Guide_to_understanding_2012_ICSEA_values.pdf)

Australian Curriculum, Assessment and Reporting Authority (ACARA). (2010). *Health and physical education*. <https://www.australiancurriculum.edu.au/f-10-curriculum/health-and-physical-education/>

Babic, M. J., Morgan, P. J., Plotnikoff, R. C., Lonsdale, C., White, R. L., & Lubans, D. R. (2014). Physical activity and physical self-concept in youth: Systematic review and meta-analysis. *Sports Medicine*, 44, 1589–1601. <https://doi.org/10.1007/s40279-014-0229-z>

Bailey, R. P., Armour, K., Kirk, D., Jess, M., Pickup, I., Sandford, R., & BERA Physical Education and Sport Pedagogy Special Interest Group (2009). The educational benefits claimed for physical education and school sport: An academic review. *Research Papers in Education*, 24(1), 1–27. <https://doi.org/10.1080/02671520701809817>

Bailey, R. P., & Dismore, H. (2004). SpinEd: The Role of Physical Education and Sport in Education. Project report to the Fourth International Conference of Ministers and Senior Officials Responsible for Physical Education and Sport (MINEPS IV), Athens.

Bailey, R. P. (2018). Sport, physical education and educational worth. *Educational Review*, 70(1), 51–66. <https://doi.org/10.1080/00131911.2018.1403208>

Bailey, R. P., Hillman, C., Arent, S., & Petitpas, A. (2013). Physical activity: An underestimated investment in human capital? *Journal of Physical Activity and Health*, 10(3), 289–308. <https://doi.org/10.1123/jpah.10.3.289>

Bangsbo, J., Krstrup, P., Duda, J., Hillman, C., Andersen, L. B., Weiss, M., Williams, C. A., Lintunen, T., Green, K., Hansen, P. R., Naylor, P., Ericsson, I., Nielsen, G., Froberg, K., Bugge, A., Lundbye-Jensen, J., Schipperijn, J., Dagkas, S., Agergaard, S., ... Elbe, A.-M. (2016). The Copenhagen consensus conference 2016: Children, youth, and physical activity in schools and during leisure time. *British Journal of Sports Medicine*, 1–2. <https://doi.org/10.1136/bjsports-2016-096325>

Barber, B. L., Eccles, J. S., & Stone, M. R. (2001). Whatever happened to the jock, the brain, and the princess?: Young adult pathways linked to adolescent activity involvement



- and social identity. *Journal of Adolescent Research*, 16(5), 429–455.  
<https://doi.org/10.1177/0743558401165002>
- Bean, C., & Forneris, T. (2016). Examining the importance of intentionally structuring the youth sport context to facilitate positive youth development. *Journal of Applied Sport Psychology*, 28(4), 410–425. <https://doi.org/10.1080/10413200.2016.1164764>
- Benner, A. D. (2016). Academic achievement: Contextual influences. In R. J. R. Levesque (Ed.), *Encyclopedia of Adolescence* (pp. 1–10). Springer International Publishing.  
[https://doi.org/10.1007/978-3-319-32132-5\\_286-2](https://doi.org/10.1007/978-3-319-32132-5_286-2)
- Biddle, S. J., & Asare, M. (2011). Physical activity and mental health in children and adolescents: A review of reviews. *British Journal of Sports Medicine*, 45, 886–895.  
<https://doi.org/10.1136/bjsports-2011-090185>
- Black, R., & Walsh, L. (2009, October 2-4). *Overcoming the barriers to engagement and equity for all students* [Conference presentation]. ACSA Biennial Conference, Canberra, Australia. [http://www.acsa.edu.au/pages/images/Walsh & Black-Overcomingthebarriers.pdf](http://www.acsa.edu.au/pages/images/Walsh%20&%20Black-Overcomingthebarriers.pdf)
- Blomfield, C. J., & Barber, B. L. (2011). Developmental experiences during extracurricular activities and Australian adolescents' self-concept: Particularly important for youth from disadvantaged schools. *Journal of Youth and Adolescence*, 40, 582–594.  
<https://doi.org/10.1007/s10964-010-9563-0>
- Blum, R. W., Astone, N. M., Decker, M. R., & Mouli, V. C. (2014). A conceptual framework for early adolescence: A platform for research. *International Journal of Adolescent Medicine and Health*, 26(3), 321–331. <https://doi.org/10.1515/ijamh-2013-0327>
- Bracken, B., Bunch, S., Keith, T., & Keith, P. (2000). Child and adolescent multidimensional self-concept: A five-instrument factor analysis. *Psychology in the Schools*, 37(6), 483–493. [https://doi.org/10.1002/1520-6807\(200011\)37:6<483::AID-PITS1>3.0.CO;2-R](https://doi.org/10.1002/1520-6807(200011)37:6<483::AID-PITS1>3.0.CO;2-R)
- Brown, B. B., & Larson, J. (2009). Peer relationships in adolescence. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (3rd ed., pp. 74–103). John Wiley & Sons.

- Bradley, J., Keane, F., & Crawford, S. (2013). School sport and academic achievement. *Journal of School Health*, 83(1), 8–13. <https://doi.org/10.1111/j.1746-1561.2012.00741.x>
- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press  
<https://books.google.com/books?hl=en&lr=&id=OCmbzWka6xUC&oi=fnd&pg=PA3&dq=bronfenbrenner+1979&ots=yyQ1L3WRif&sig=4gYtIsidHjwjIwD7rfRtq-Sm-Ug>
- Brownell, M. D., Roos, N. P., Macwilliam, L., Leclair, L., Ekuma, O., & Fransoo, R. (2010). Academic and social outcomes for high—risk youths in Manitoba. *Canadian Journal of Education*, 33(4), 804–836.
- Brunelle, J., Danish, S. J., & Forneris, T. (2007). The impact of a sport-based life skill program on adolescent prosocial values. *Applied Developmental Science*, 11(1), 43–55. <https://doi.org/10.1080/10888690709336722>
- Caddick, N., & Smith, B. (2014). The impact of sport and physical activity on the well-being of combat veterans: A systematic review. *Psychology of Sport and Exercise*, 15, 9–18. <https://doi.org/10.1016/j.psychsport.2013.09.011>
- Camiré, M., Trudel, P., & Bernard, D. (2013). A case study of a high school sport program designed to teach athletes life skills and values. *The Sport Psychologist*, 27, 188–200.
- Card, D., & Payne, A. A. (2002). School finance reform, the distribution of school spending, and the distribution of student test scores. *Journal of Public Economics*, 83(1), 49–82. [https://doi.org/10.1016/S0047-2727\(00\)00177-8](https://doi.org/10.1016/S0047-2727(00)00177-8)
- CASP. (2017). *Critical appraisal skills programme*. <https://casp-uk.net/casp-tools-checklists/>
- Castro, F. G., Kellison, J. G., Boyd, S. J., & Kopak, A. (2010). A methodology for conducting integrative mixed methods research and data analyses. *Journal of Mixed Methods Research*, 4(4), 342–360. <https://doi.org/10.1177/1558689810382916>
- Chen, A., & Ennis, C. (2009). Motivation and achievement in physical education. In K. R. Wentzel & D. Miele (Eds.), *Handbook of Motivation at School* (pp. 553–574). Taylor & Francis.

- Chen, K. H., & Yao, G. (2010). Investigating adolescent health-related quality of life: From a self-identity perspective. *Social Indicators Research*, 96, 403–415.  
<https://doi.org/10.1007/s11205-009-9483-0>
- Chetty, R., & Hendren, N. (2018). The impacts of neighbourhoods on intergenerational mobility: Childhood exposure effects. *Quarterly Journal of Economics*, 133(3), 1107–1162. <https://doi.org/10.1093/qje/qjy007.Advance>
- Collins, K., Gould, D., Lauer, L., & Chung, Y. (2009). Coaching life skills through football: Philosophical beliefs of outstanding high school football coaches. *International Journal of Coaching Science*, 3(1), 29–54.
- Connell, R. W. (1983). *Which way is up? Essays on class, sex, and culture*. Allen & Unwin.
- Craig, R. O. (2019). *Hypermasculinity*. Encyclopedia Britannica.  
<https://www.britannica.com/topic/hypermasculinity>
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York, NY: Harper Perennial.
- Danish, S., Kleiber, D., & Hall, H. (1987). Developmental intervention and motivation enhancement in the context of sport. *Advances in Motivation and Achievement: A research annual*, 211-235. Greenwich, CT: JAI Press.
- Danish, S. J., Forneris, T., & Wallace, I. (2005). Sport-based life skills programming in the schools. *Journal of Applied School Psychology*, 21(2), 41–62.  
<https://doi.org/10.1300/J370v21n02>
- Danish, S., Forneris, T., Hodge, K., & Heke, I. (2004). Enhancing youth development through sport. *World Leisure Journal*, 46(3), 38–49.  
<https://doi.org/10.1080/04419057.2004.9674365>
- Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2019). Implications for educational practice of the science of learning and development. *Applied Developmental Science*, 24(2), 97–140.  
<https://doi.org/10.1080/10888691.2018.1537791>
- Deci, E. L., & Ryan, R. M. (2000). The ‘what’ and ‘why’ of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.  
[https://doi.org/10.1207/S15327965PLI1104\\_01](https://doi.org/10.1207/S15327965PLI1104_01)

- Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology*, 49(1), 14–23.  
<https://doi.org/10.1037/0708-5591.49.1.14>
- Demetriou, Y., & Höner, O. (2012). Physical activity interventions in the school setting: A systematic review. *Psychology of Sport and Exercise*, 13, 186–196.  
<https://doi.org/10.1016/j.psychsport.2011.11.006>
- Department of Education and Training. (2018). *Through growth to achievement: Report of the review to achieve educational excellence in Australian schools*. Commonwealth of Australia. <https://doi.org/10.1016/j.psyneuen.2007.05.007>
- Department of Education. (2018). *Approved specialist programs*. Government of Western Australia. <https://www.education.wa.edu.au/approved-specialist-programs>
- Desai, M. (2010). *A rights-based preventative approach for psychosocial well-being in childhood*. Springer.
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. won, Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, 97(2), 143–156.  
<https://doi.org/10.1007/s11205-009-9493-y>
- Dotterer, A. M., McHale, S. M., & Crouter, A. C. (2007). Implications of out-of-school activities for school engagement in African American adolescents. *Journal of Youth and Adolescence*, 36, 391–401. <https://doi.org/10.1007/s10964-006-9161-3>
- Dyson, B. (2006). Students' perspectives in Physical Education. In D. Kirk, D. MacDonald, & M. O'Sullivan (Eds.), *The Handbook of Physical Education* (pp. 326–436).
- Eccles, J. S., & Barber, B. L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research*, 14(1), 10–43. <https://doi.org/10.1177/0743558499141003>
- Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., & Mac Iver, D. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. *American Psychologist*, 48(2), 90–101. <https://doi.org/10.1037/0003-066X.48.2.90>

- Eccles, J., Wigfield, A., Harold, R. D., & Blumenfeld, P. (1993). Age and gender differences in children's self- and task perceptions during elementary school. *Child Development*, 64(3), 830–847. <https://doi.org/10.1111/j.1467-8624.1993.tb02946.x>
- Eime, R. M., Young, J. a, Harvey, J. T., Charity, M. J., & Payne, W. R. (2013). A systematic review of the psychological and social benefits of participation in sport for children and adolescents: informing development of a conceptual model of health through sport. *The International Journal of Behavioral Nutrition and Physical Activity*, 10(1), 1–21. <https://doi.org/10.1186/1479-5868-10-98>
- Eklund, R. C., Whitehead, J. R., & Welk, G. J. (1997). Validity of the children and youth physical self-perception profile: A confirmatory factor analysis. *Research Quarterly Exercise and Sport*, 68(3), 249–256. <https://doi.org/10.1080/02701367.1997.10608004>
- Erikson, E. H. (1968). *Identity: Youth and crisis*. New York, NY: Norton
- Eryilmaz, A. (2012). A model for subjective well-being in adolescence: Need satisfaction and reasons for living. *Social Indicators Research*, 107, 561–574. <https://doi.org/10.1007/s11205-011-9863-0>
- Fairclough, S. J. (2003). Physical activity, perceived competence and enjoyment during high school physical education. *European Journal of Physical Education*, 8(1), 5–18. <https://doi.org/10.1080/1740898030080102>
- Findlay, L. C., & Bowker, A. (2009). The link between competitive sport participation and self-concept in early adolescence: A consideration of gender and sport orientation. *Journal of Youth and Adolescence*, 38, 29–40. <https://doi.org/10.1007/s10964-007-9244-9>
- Fraser-Thomas, J. L., Cote, J., Deakin, J., Côté, J., & Deakin, J. (2005). Youth sport programs: An avenue to foster positive youth development. *Physical Education & Sport Pedagogy*, 10(1), 19–40. <https://doi.org/10.1080/1740898042000334890>
- Fraser-Thomas, J., & Côté, J. (2009). Understanding adolescents' positive and negative developmental experiences in sport. *The Sport Psychologist*, 23, 3–23.
- Fraser, K. D., & al Sayah, F. (2011). Arts-based methods in health research: A systematic review of the literature. *Arts & Health*, 3(2), 110–145. <https://doi.org/10.1080/17533015.2011.561357>

- Fredricks, J. A, Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109. <https://doi.org/10.3102/00346543074001059>
- Gaete, V. (2015). Adolescent psychosocial development. *Revista Chilena de Pediatría*, 86(6), 436–443. <https://doi.org/10.1016/j.rchipe.2015.07.005>
- Gagne, M. (2003). Autonomy support and need satisfaction in the motivation and well-being of gymnasts. *Journal of Applied Sport Psychology*, 15(4), 372–390. <https://doi.org/10.1080/714044203>
- Galagali, P. M. (2011). Adolescence and life skills. In R. Olyai & D. K. Dutta (eds.), *Recent advances in adolescent health*, (pp. 209–218). New Delhi: JAYPEE Brothers Medical Publishers.
- Ganeshkumar, P., & Gopalakrishnan, S. (2013). Systematic reviews and meta-analysis: Understanding the best evidence in primary healthcare. *Journal of Family Medicine and Primary Care*, 2(1), 9-14. <https://doi.org/10.4103/2249-4863.109934>
- Garry, J. P., & Morrissey, S. L. (2000). Team sports participation and risk-taking behaviors among a biracial middle school population. *Clinical Journal of Sport Medicine*, 10, 185–190. <https://doi.org/10.1097/00042752-200007000-00006>
- Gershoff, E. T., & Aber, J. L. (2006). Neighborhoods and schools: Contexts and consequences for the mental health and risk behaviors of children and youth. In L. Balter & C. S. Tamis-LeMonda (Eds.), *Child Psychology: A handbook of contemporary issues* (pp. 611–645). Psychology Press.
- Goddard, D. (1995). *Specialist sport programs in Western Australian schools*. Perth, Western Australia: Ministry of Sport and Recreation.
- Goodman, E., Huang, B., Schafer-Kalkhoff, T., & Adler, N. E. (2007). Perceived socioeconomic status: A new type of identity that influences adolescents' self-rated health. *Journal of Adolescent Health*, 41(5), 479–487. <https://doi.org/10.1016/j.jadohealth.2007.05.020>
- Goodman, E., Slap, G. B., & Huang, B. (2003). The public health impact of socioeconomic status on adolescent depression and obesity. *The American Journal of Public Health*, 93(11), 1844–1850. <https://doi.org/10.2105/AJPH.93.11.1844>

- Gore, S., Farrell, F., & Gordon, J. (2001). Sports involvement as protection against depressed mood. *Journal of Research on Adolescence*, 11(1), 119–130.  
<https://doi.org/10.1111/1532-7795.00006>
- Gould, D. (2010). Early sport specialization. *Journal of Physical Education, Recreation & Dance*, 81(8), 33–37. <https://doi.org/10.1080/07303084.2010.10598525>
- Gould, D., & Carson, S. (2008). Life skills development through sport: Current status and future directions. *International Review of Sport and Exercise Psychology*, 1(1), 58–78. <https://doi.org/10.1080/17509840701834573>
- Graham, S., MacFadyen, T., & Richards, B. (2012). Learners' perceptions of being identified as very able: insights from modern foreign languages and physical education. *Journal of Curriculum Studies*, 44(3), 323–348.  
<https://doi.org/10.1080/00220272.2012.662525>
- Gross, J., & Murphy, K. (1990). Youth sport schools for New Zealand schools. *New Zealand Journal of Health, Physical Education and Recreation*, 23(1), 6–14.
- Hancock, K. J., Shepherd, C. C. J., Lawrence, D., & Zubrick, S. R. (2013). *Student attendance and educational outcomes: Every day counts*. Report for the Department of Education, Employment and Workplace Relations, Canberra.  
<https://doi.org/10.13140/2.1.4956.6728>
- Harms, P. D., Brady, L., Wood, D., & Silard, A. (2018). Resilience and well-being. In E. Diener, S. Oishi, & L. Tay (Eds.), *Handbook of well-being*. Salt Lake City, UT: DEF Publishers.
- Harriss, D., & Cibich, T. (1999). Specialist sport schools: Henley high school, South Australia. *Active & Healthy Magazine*, 6(1), 11–12.
- Hazel, C. E., Vazirabadi, G. E., Albanes, J., & Gallagher, J. (2014). Evidence of convergent and discriminant validity of the student school engagement measure. *Psychological Assessment*, 26(3), 806–814. <https://doi.org/10.1037/a0036277>
- Hazel, C. E., Vazirabadi, G. E., & Gallagher, J. (2013). Measuring aspirations, belonging, and productivity in secondary students: Validation of the student school engagement measure. *Psychology in Schools*, 50(7), 689–704. <https://doi.org/10.1002/pits>
- Hecimovich, M. (2004). Sport specialization in youth: A literature review. *Journal of the American Chiropractic Association*, 41(4), 32–41.

[https://researchrepository.murdoch.edu.au/id/eprint/4422/1/sport\\_specialization\\_in\\_youth.pdf](https://researchrepository.murdoch.edu.au/id/eprint/4422/1/sport_specialization_in_youth.pdf)

- Hirshi, T. (1969). *Causes of delinquency*. University of California Press. Berkeley, CA.
- Hjemdal, O., Friborg, O., Stiles, T. C., Martinussen, M., & Rosenvinge, J. H. (2006). A new scale for adolescent resilience: Grasping the central protective resources behind healthy development. *Measurement and Evaluation in Counselling and Development*, 39, 84–97.
- Holt, N. L. (2008). Introduction: Positive youth development through sport. In N. L. Holt (Ed.), *Positive Youth Development through Sport*, 1–137. Routledge, London & New York. <https://doi.org/10.4324/9780203944783>
- Huebner, S. E., Seligson, J. L., Valois, R. F., & Suldo, S. M. (2006). A review of the brief multidimensional students' life satisfaction scale. *Social Indicators Research*, 79, 477–484. <https://doi.org/10.1007/s11205-005-5395-9>
- Inderbitzen, H. M., & Foster, S. L. (1992). The teenage inventory of social skills: Development, reliability, and validity. *Psychological Assessment*, 4(4), 451–459. <https://doi.org/10.1037/1040-3590.4.4.451>
- Inglés, C., Hidalgo, M. D., Méndez, F. X., & Inderbitzen, H. M. (2003). The teenage inventory of social skills: Reliability and validity of the Spanish translation. *Journal of Adolescence*, 26, 505–510. [https://doi.org/10.1016/S0140-1971\(03\)00032-0](https://doi.org/10.1016/S0140-1971(03)00032-0)
- Jencks, C., & Mayar, S. (1990). The social consequences of growing up in a poor neighborhood. In L. E. Lynn Jr. & M. G. H. McGeary (eds.), *Inner-city poverty in the United States* (pp. 111–186). National Academy Press, Washington, DC.
- Jones, G. J., Edwards, M. B., Bocarro, J. N., Bunds, K. S., & Smith, J. W. (2016). An integrative review of sport-based youth development literature. *Sport in Society*, 20(1), 161–179. <https://doi.org/10.1080/17430437.2015.1124569>
- Jones, R. J., Polman, R. C., & Peters, D. M. (2009). Physical self-perceptions of adolescents in years 8, 9 and 10 in independent schools, state comprehensive schools and specialist sport colleges in England. *Physical Education & Sport Pedagogy*, 14(2), 109–124. <https://doi.org/10.1080/17408980701712122>
- Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing. *Journal of Health and Social Behavior*, 43(2), 207–222.



- Kristjánsson, K. (2012). Positive psychology and positive education: Old wine in new bottles? *Educational Psychologist*, 47(2), 86–105.  
<https://doi.org/10.1080/00461520.2011.610678>
- Lamb, S., Jackson, J., Walstab, A., & Huo, S. (2015). *Educational opportunity in Australia 2015: Who succeeds and who misses out*, Centre for International Research on Educational Systems, for the Mitchell Institute.
- Larson, R. W. (2000). Toward a psychology of positive youth development. *American Psychologist*, 55(1), 170–183. <https://doi.org/10.1037//0003-066X>
- Laurin, R., & Nicolas, M. (2009). Conscientiousness, self-determination, and satisfaction in soccer academies: A longitudinal perspective. *International Journal of Sport and Exercise Psychology*, 7(2), 169–184.  
<https://doi.org/10.1080/1612197X.2009.9671898>
- Lawrence, D., Johnson, S., Hafekost, J., Boterhoven de Haan, K., Sawyer, M., Ainley, J., & Zubrick, S. R. (2015). *The mental health of children and adolescents: Report on the second Australian child and adolescent survey of mental health and wellbeing*. Department of Health, Canberra
- Lerner, R. M., & Spanier, G. B. (1980). A dynamic interactional view of child and family development. In R. M. Lerner & G. B. Spanier (Eds.), *Child influences on marital and family interaction: A life-span perspective* (pp. 1–20). Academic.
- Levačić, R., & Jenkins, A. (2006). Evaluating the effectiveness of specialist schools in England. *School Effectiveness and School Improvement*, 17(3), 229–254.  
<https://doi.org/10.1080/09243450600697267>
- Leventhal, T., Dupéré, V., & Brooks-Gunn, J. (2009). Neighborhood influences on adolescent development. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of Adolescent Psychology* (3<sup>rd</sup> Ed., pp. 411–443). John Wiley & Sons.
- Leventhal, T., & Brooks-Gunn, J. (2001). Changing neighborhoods and child well-being: Understanding how children may be affected in the coming century. *Advances in Life Course Research*, 6, 263–301. [https://doi.org/10.1016/S1040-2608\(01\)80013-7](https://doi.org/10.1016/S1040-2608(01)80013-7)
- Leventhal, T., & Brooks-Gunn, J. (2000). The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin*, 126(2), 309–337. <https://doi.org/10.1037/0033-2909.126.2.309>

- Leventhal, T., Dupéré, V., & A. Shuey, E. (2015). Children in neighborhoods. In *Handbook of Child Psychology and Developmental Science* (pp. 1–41). John Wiley & Sons, Inc. <https://doi.org/10.1002/9781118963418.childpsy413>
- Leveresen, I., Danielsen, A. G., Birkeland, M. S., & Samdal, O. (2012). Basic psychological need satisfaction in leisure activities and adolescents' life satisfaction. *Journal of Youth and Adolescence*, 41(12), 1588–1599. <https://doi.org/10.1007/s10964-012-9776-5>
- Light, R., & Kirk, D. (2000). High school rugby, the body and the reproduction of hegemonic masculinity. *Sport, Education and Society*, 5(2), 163–176. <https://doi.org/10.1080/713696032>
- Ludwig, J., Duncan, G. J., Gennetian, L. A., Katz, L. F., Kessler, R. C., Kling, J. R., & Sanbonmatsu, L. (2013). Long-term neighborhood effects on low-income families: Evidence from moving to opportunity. *The American Economic Review*, 103(3), 226–231.
- Mahoney, J. L., Lowe, Vandell, D., Simpkins, S., & Zarrett, N. (2009). Adolescent out-of-school activities. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (3<sup>rd</sup> Ed., pp. 228–269). John Wiley & Sons.
- Mahoney, J. L., & Stattin, H. (2000). Leisure activities and adolescent antisocial behavior: The role of structure and social context. *Journal of Adolescence*, 23(2), 113–127. <https://doi.org/10.1006/jado.2000.0302>
- Manning, M. A. (2007). *Self-concept and self-esteem in adolescents*. Student Services, 2, 11–15.
- Marsh, H. W., Morin, A. J. S., & Parker, P. D. (2015). Physical self-concept changes in a selective sport high school: A longitudinal cohort-sequence analysis of the big-fish-little-pond effect. *Journal of Sport & Exercise Psychology*, 37, 150–163.
- Marsh, H. W. (1993). The effects of participation in sport during the last two years of high school. *Sociology of Sport Journal*, 10, 18–43.
- Marsh, H. W., Martin, A. J., & Jackson, S. (2010). Introducing a short version of the physical self-description questionnaire: New strategies, short-form evaluative criteria, and applications of factor analyses. *Journal of Sport and Exercise Psychology*, 32, 438–482. <https://doi.org/10.1123/jsep.32.4.438>

- Mccrae, R. R., Costa, P. T., & Martin, T. A. (2005). The NEO-PI-3: A more readable revised NEO personality inventory. *Journal of Personality Assessment*, 84(3), 261-270.  
<https://doi.org/10.1207/s15327752jpa8403>
- McKenzie, T. L. (2019). Physical activity within school contexts: The bigger bang theory. *Kinesiology Review*, 8, 48–53. <https://doi.org/10.1123/kr.2018-0057>
- McLoyd, V. C., Kaplan, R., Purtell, K. M., Bagley, E., Hardaway, C. R., & Smalls, C. (2009). Poverty and socio-economic disadvantage in adolescence. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of Adolescent Psychology* (3<sup>rd</sup> Ed., pp. 444–491). John Wiley & Sons.
- McNeely, C., & Blanchard, J. (2009). *The teen years explained: A guide to healthy adolescent development*. Center for Adolescent Health at Johns Hopkins Bloomberg School of Public Health.
- Menrath, I., Mueller-Godeffroy, E., Pruessmann, C., Ravens-Sieberer, U., Ottova, V., Pruessmann, M., Erhart, M., Hillebrandt, D., & Thyen, U. (2012). Evaluation of school-based life skills programmes in a high-risk sample: A controlled longitudinal multi-centre study. *Journal of Public Health*, 20(2), 159–170.  
<https://doi.org/10.1007/s10389-011-0468-5>
- Molinari, L., & Marni, C. (2018). Basic psychological needs and school engagement: A focus on justice and agency. *Social Psychology of Education*, 21(1), 157–172.  
<https://doi.org/10.1007/s11218-017-9410-1>
- Nakamura, J., & Csikszentmihalyi, M. (2009). Flow theory and research. In C. R. Snyder & S. J. Lopez (Eds.), *Oxford Handbook of Positive Psychology* (pp. 195–206). Oxford University Press.
- National Research Council and Institute of Medicine. (2002). *Community programs to promote youth development*. Committee on Community-Level Programs for Youth. J. Eccles, & J. A. Gootman (Eds.), Board on Children, Youth, and Families, Division of Behavioral and Social Sciences and Education. Washington, DC: National Academy Press. <http://files.eric.ed.gov/fulltext/ED465844.pdf>
- Noble, T., & McGrath, H. (2015). PROSPER: A new framework for positive education. *Psychology of Well-Being*, 5(2), 1-17. <https://doi.org/10.1186/s13612-015-0030-2>

- Olushola, J. O., Jones, D. F., Dixon, M. A., & Green, B. C. (2013). More than basketball: Determining the sport components that lead to long-term benefits for African-American girls. *Sport Management Review*, 16, 211–225.  
<https://doi.org/10.1016/j.smr.2012.07.002>
- Ozer, E. J. (2017). Youth-led participatory action research: Overview and potential for enhancing adolescent development. *Child Development Perspectives*, 11(3), 173–177.  
<https://doi.org/10.1111/cdep.12228>
- Park, S., Holloway, S. D., Arendtsz, A., Bempechat, J., & Li, J. (2012). What makes students engaged in learning? A time-use study of within- and between-individual predictors of emotional engagement in low-performing high schools. *Journal of Youth and Adolescence*, 41, 390–401. <https://doi.org/10.1007/s10964-011-9738-3>
- Parkville Global Advisory. (2014). *National evaluation for the low SES national partnership and the literacy and numeracy national partnership - impact stage*. Australian Government, Department of Education.
- Petitpas, A. J., Cornelius, A. E., Raalte, J. L. Van, & Jones, T. (2005). A framework for planning youth sport programs that foster psychosocial development. *The Sport Psychologist*, 19, 63–80.
- Pietkiewicz, I., & Smith, J. A. (2014). A practical guide to using interpretative phenomenological analysis in qualitative research psychology. *Czasopismo Psychologiczne (Psychological Journal)*, 20(1), 7-14.  
<https://doi.org/10.14691/CPJ.20.1.7>
- Pope, C. C. (2002). Plato makes the team: The arrival of secondary school sport academies. *Waikato Journal of Education*, 8, 90-100.
- Poulou, M. S., & Norwich, B. (2019). Adolescent students' psychological needs: Development of an existence, relatedness, and growth needs scale. *International Journal of School & Educational Psychology*, 7(1), 75–83.  
<https://doi.org/10.1080/21683603.2018.1479320>
- Public Health Resource Unit. (2007). *Appraisal tools*.  
<http://www.phru.nhs.uk/pages/phd/resources.htm>

- Putwain, D. W. (2008). Test anxiety and GCSE performance: The effect of gender and socio-economic background. *Educational Psychology in Practice*, 24(4), 319–334.  
<https://doi.org/10.1080/02667360802488765>
- Radtke, S., & Coalter, F. (2007). *Sports schools: An international review. Report to the Scottish Institute of Sport Foundation*. University of Stirling, Stirling, August.
- Rasberry, C. N., Lee, S. M., Robin, L., Laris, B. A., Russell, L. A., Coyle, K. K., & Nihiser, A. J. (2011). The association between school-based physical activity, including physical education, and academic performance: A systematic review of the literature. *Preventive Medicine*, 52, 510-520. <https://doi.org/10.1016/j.ypmed.2011.01.027>
- Rauscher, L., & Cooky, C. (2016). Ready for anything the world gives her?: A critical look at sports-based positive youth development for girls. *Sex Roles*, 74, 288–298.  
<https://doi.org/10.1007/s11199-014-0400-x>
- Reeve, J., & Lee, W. (2019). A neuroscientific perspective on basic psychological needs. *Journal of Personality*, 87, 102–114. <https://doi.org/10.1111/jopy.12390>
- Roth, J., Brooks-Gunn, J., Murray, L., & Foster, W. (1998). Promoting healthy adolescents: Synthesis of youth development program evaluations. *Journal of Research on Adolescence*, 8(4), 423–459. [https://doi.org/10.1207/s15327795jra0804\\_2](https://doi.org/10.1207/s15327795jra0804_2)
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25, 54–67.  
<https://doi.org/10.1006/ceps.1999.1020>
- Ryan, R. M., & Deci, E. L. (2009). Promoting self-determined school engagement. In K. R. Wentzel & D. Miele (Eds.), *Handbook of Motivation at School* (pp. 171–195). Taylor & Francis.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*.  
[https://books.google.com/books?hl=en&lr=&id=Bc\\_DDAAAQBAJ&oi=fnd&pg=PP1&ots=QHmikdjT2j&sig=6Hg8v57C9S-nHooCNOyJnfH2o5Q](https://books.google.com/books?hl=en&lr=&id=Bc_DDAAAQBAJ&oi=fnd&pg=PP1&ots=QHmikdjT2j&sig=6Hg8v57C9S-nHooCNOyJnfH2o5Q)
- Sagar, S. S., Lavalley, D., & Spray, C. M. (2007). Why young elite athletes fear failure: consequences of failure. *Journal of Sports Sciences*, 25(11), 1171–1184.  
<https://doi.org/10.1080/02640410601040093>

- Sampson, R. J., & Laub, J. H. (1992). Crime and deviance in the life course. *Annual Review of Sociology*, 18(1), 63–84. <https://doi.org/10.1146/annurev.so.18.080192.000431>
- Sampson, R. J., Morenoff, J. D., & Gannon-Rowley, T. (2002). Assessing “neighborhood effects”: Social processes and new directions in research. *Annual Review of Sociology*, 28(1), 443–478. <https://doi.org/10.1146/annurev.soc.28.110601.141114>
- Sanders, J., Munford, R., Thimasarn-Anwar, T., Liebenberg, L., & Ungar, M. (2015). The role of positive youth development practices in building resilience and enhancing wellbeing for at-risk youth. *Child Abuse & Neglect*, 42, 40–53. <https://doi.org/10.1016/j.chiabu.2015.02.006>
- Sanders, R. A. (2013). Adolescent psychosocial, social, and cognitive development. *Pediatrics in Review*, 34(8), 354–359. <https://doi.org/10.1542/pir.34-8-354>
- Scanlan, T. K., Babkes, M. L., & Scanlan, L. A. (2005). Participation in sport: A developmental glimpse at emotion. In J. L. Mahoney, R. W. Larson, & J. S. Eccles (Eds.), *Organized Activities As Contexts of Development: Extracurricular Activities, After School and Community Programs* (pp. 275–309). <https://doi.org/10.4324/9781410612748>
- School Curriculum and Standards Authority. (2016). *Pre-primary to year 10: Teaching, assessing and reporting policy. Policy standards for pre-primary to year 10: Teaching, assessing and reporting*. Government of Western Australia
- School Curriculum and Standards Authority. (2017). *Health and physical education*. Government of Western Australia <http://documents.worldbank.org/curated/en/2003/10/2981046/mental-health-conflict>
- Sciarra, D. T., & Seirup, H. J. (2008). The multidimensionality of school engagement and math achievement among racial groups. *Professional School Counselling*, 218–228.
- Seligson, J. L., Huebner, E. S., & Valois, R. F. (2003). Preliminary validation of the brief multidimensional students’ life satisfaction scale (BMSLSS). *Social Indicators Research*, 61(2), 121–145.
- Sherhoff, D. J., & Csikszentmihalyi, M. (2009). Flow in schools: Cultivating engaged learners and optimal learning environments. In R. Gilman, E. S. Huebner, & M. J. Furlong (Eds.), *Handbook of Positive Psychology in Schools* (pp. 131–146). New York and London: Taylor & Francis Group.

- Smiler, A. (2016). *Man up... Whatever that means*. American Psychological Association.  
<https://www.apa.org/pi/about/newsletter/2016/04/man-up>
- Smith, A., & Parr, M. (2007). Young people's views on the nature and purpose of physical education: A sociological analysis. *Sport, Education & Society*, 12(1), 37–58.
- Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis*. SAGE Publications.
- Sport for Development and Peace International Working Group. (2006). From practice to policy.  
[https://www.sportanddev.org/sites/default/files/downloads/20\\_s\\_for\\_dev\\_and\\_peace\\_from\\_practice\\_to\\_policy.pdf](https://www.sportanddev.org/sites/default/files/downloads/20_s_for_dev_and_peace_from_practice_to_policy.pdf)
- Stone, D. L., & Rosopa, P. J. (2017). The advantages and limitations of using meta-analysis in human resource management research. *Human Resource Management Review*, 27, 1–7. <https://doi.org/10.1016/j.hrmr.2016.09.001>
- Sturdevant, M. S., & Spear, B. (2002). Adolescent psychosocial development. *Journal of the American Dietetic Association*, 102(3), S30–S31. [https://doi.org/10.1016/S0002-8223\(02\)90419-0](https://doi.org/10.1016/S0002-8223(02)90419-0)
- Su, R., Tay, L., & Diener, E. (2014). The development and validation of the comprehensive inventory of thriving (CIT) and the brief inventory of thriving (BIT). *Applied Psychology: Health and Well-Being*, 6(3), 251–279.  
<https://doi.org/10.1111/aphw.12027>
- Swann, C., Keegan, R. J., Piggott, D., & Crust, L. (2012). A systematic review of the experience, occurrence, and controllability of flow states in elite sport. *Psychology of Sport and Exercise*, 13(6), 807–819. <https://doi.org/10.1016/j.psychsport.2012.05.006>
- Taylor, J. (2007). Estimating the impact of the specialist schools programme on secondary school examination results in England. *Oxford Bulletin of Economics and Statistics*, 69(4), 445–471. <https://doi.org/10.1111/j.1468-0084.2007.00446.x>
- Totten, M. (2007). *The health, social and economic benefits of increasing access to recreation for low-income families: Research summary report*. Ministry of Health Promotion, Ontario.
- Tov, W. (2018). Well-being concepts and components. In E. Diener, S. Oishi, & L. Tay (Eds.), *Handbook of Well-Being*. Salt Lake City, UT: DEF Publishers.

- Ullrich-French, S., McDonough, M. H., & Smith, A. L. (2012). Social connection and psychological outcomes in a physical activity-based youth development setting. *Research Quarterly for Exercise and Sport*, 83(3), 431–441.  
<https://doi.org/10.5641/027013612802573049>
- United Nations Children’s Fund (UNICEF). (2011). Adolescence: An age of opportunity. In *The State of the World’s Children*. [https://www.unicef.org/sowc2011/pdfs/SOWC-2011-Main-Report\\_EN\\_02092011.pdf](https://www.unicef.org/sowc2011/pdfs/SOWC-2011-Main-Report_EN_02092011.pdf)
- United Nations Children’s Fund (UNICEF). (2005). *Adolescent development: Perspectives and frameworks*. Adolescent Development and Participation Unit Programme Division. [https://www.unicef.org/ADAP\\_series\\_1.pdf](https://www.unicef.org/ADAP_series_1.pdf)
- Vanderbilt-Adriance, E., & Shaw, D. S. (2008). Protective factors and the development of resilience in the context of neighborhood disadvantage. *Journal of Abnormal Child Psychology*, 36, 887–901. <https://doi.org/10.1007/s10802-008-9220-1>
- Vilhjalmsson, R., & Thorlindsson, T. (1992). The integrative and physiological effects of sport participation: A study of adolescents. *The Sociological Quarterly*, 33(4), 637–647. <https://doi.org/10.1111/j.1533-8525.1992.tb00148.x>
- Vizzotto, A., de Oliveira, A., Elkis, H., Cordeiro, Q., Buchain, P. (2020). *Psychosocial characteristics*. In M. D. Gellman (Eds.), *Encyclopedia of Behavioral Medicine*. [https://doi.org/10.1007/978-1-4614-6439-6\\_918-2](https://doi.org/10.1007/978-1-4614-6439-6_918-2)
- Walker, J., Marczak, M., Blyth, D., & Borden, L. (2005). Designing youth development programs: Toward a theory of developmental intentionality. In *Organized Activities As Contexts of Development: Extracurricular Activities, After School and Community Programs* (pp. 399–418). <https://doi.org/10.4324/9781410612748>
- Waller, M. a. (2001). Resilience in ecosystemic context: Evolution of the concept. *The American Journal of Orthopsychiatry*, 71(3), 290–297. <https://doi.org/10.1037/0002-9432.71.3.290>
- Weinberg, D., Stevens, G. W. J. M., Finkenauer, C., Brunekreef, B., Smit, H. A., & Wijga, A. H. (2019). The pathways from parental and neighbourhood socioeconomic status to adolescent educational attainment: An examination of the role of cognitive ability, teacher assessment, and educational expectations. *PLoS ONE*, 14(5), 1–20.  
<https://doi.org/10.1371/journal.pone.0216803>



- Weissensteiner, J., Abernethy, B., & Farrow, D. (2009). Towards the development of a conceptual model of expertise in cricket batting: A grounded theory approach. *Journal of Applied Sport Psychology*, 21(3), 276–292.  
<https://doi.org/10.1080/10413200903018675>
- Whitehead, J. R. (1995). A study of children's physical self-perceptions using an adapted physical self-perception profile questionnaire. *Pediatric Exercise Science*, 7, 132–151.  
<https://doi.org/10.1123/pes.7.2.132>
- Windle, G., Bennett, K. M., & Noyes, J. (2011). A methodological review of resilience measurement scales. *Health and Quality of Life Outcomes*, 9(8), 1-18.  
<https://doi.org/10.1186/1477-7525-9-8>
- Winnail, S. D., Valois, R. F., Dowda, M., McKeown, R. E., Saunders, R. P., & Pate, R.. (1997). Athletics and substance use among public high school students in a southern state. *American Journal of Health Studies*, 13(4), 187-194.  
<https://search.proquest.com/docview/210477257/fulltextPDF/4174E5D6AEB7444EPQ/1?accountid=10675>
- World Health Organization. (1999). *Partners in life skills education*. 1-17  
<https://doi.org/10.13173/zeitdeutmorggese.167.1.0023>
- World Health Organization. (2014). *Physical activity fact sheet #385*. 1–5.  
[www.who.int/mediacentre/factsheets/fs385/en](http://www.who.int/mediacentre/factsheets/fs385/en)
- Xue, Y., Leventhal, T., Brooks-Gunn, J., & Earls, F. J. (2005). Neighborhood residence and mental health problems of 5- to 11-year-olds. *Archives of General Psychiatry*, 62, 554–563. <https://doi.org/10.1001/archpsyc.62.5.554>
- Yardley, L. (2000). Dilemmas in qualitative health research. *Psychology & Health*, 15(2), 215–228. <https://doi.org/10.1080/08870440008400302>
- Zaborskis, A., Grincaite, M., Lenzi, M., Tesler, R., Moreno-Maldonado, C., & Mazur, J. (2019). Social inequality in adolescent life satisfaction: Comparison of measure approaches and correlation with macro-level indices in 41 countries. *Social Indicators Research*, 141, 1055–1079. <https://doi.org/10.1007/s11205-018-1860-0>
- Zimmermann-Sloutskis, D., Wanner, M., Zimmermann, E., & Martin, B. W. (2010). Physical activity levels and determinants of change in young adults: A longitudinal panel

study. *International Journal of Behavioral Nutrition and Physical Activity*, 7(2), 1–13.  
<https://doi.org/10.1186/1479-5868-7-2>

