

20140149_Socioeconomic Status as a Significant Moderator in the Association
between Adolescent Externalizing Problems and Parents Asp.docx

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Bachelor of Arts, Psychology with Honours

*This thesis is presented in partial fulfilment of the requirements for the degree of
Bachelor of Arts (Honours), Murdoch University, 2016.*

I declare that this thesis is my own account of my group's research and contains as its main content work which has not previously been submitted for a degree at any tertiary educational institution.

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Abstract

Students from low socioeconomic areas are often underrepresented in universities across Australia. This has resulted in a focus to increase university participation of low SES students in Australia through increasing aspirations. In particular, students with externalizing problems have been largely excluded from the literature and the effect on their educational aspirations remain unknown. However, studies into aspirations have determined that students' educational aspirations remain relatively invariant across SES, and that parental aspirations are a major influence of educational aspirations. It is unknown parental aspirations would remain invariant in the face of externalizing problem. Limited research has suggested that parental aspirations may be negatively affected by students' behavioural problems. Additionally, SES has also been implicated as one of the strongest determinants of parental aspirations. As such, this research examined the influence of externalizing problems on parental aspirations, moderated by SES. A self-report survey was administered to 142 parents and data was analyzed using Moderated Multiple Hierarchical Analysis. Results indicated that externalizing problems did not impact on parental aspirations which support Appadurai's contentions that aspirations are invariant. Results further indicated that SES significantly moderated the association. Further analysis indicated that in the low SES samples, parental aspirations increased as levels of externalizing problems increased, while no effect was observed in the high SES sample. Overall, the results provide tentative support for Appadurai's theory of navigational capacity, which supports the concept of aspirations being invariant, but resources available leads to differing capacities to aspire.

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Being successful in today's society increasingly relies on knowledge gleaned from university institutions. Various studies have found links between university degree attainment and adult outcomes, such as level of income and occupational prestige (Brock, 2010). However, research suggests that students from low SES backgrounds with externalizing behaviours experience more obstacles, and as such have considerably lower rates of university attendance in Australia as compared to students of higher SES (Berzin, 2010; Breslau, Lane, Sampson & Kaiser, 2008). With university attendance playing a key role in students' quality of life, it is important to understand the factors that may represent an obstacle to attendance in university. Parental aspirations have been shown to be a key determinant in university attendance as studies have determined that it is associated with students own educational aspirations (Spera, Wentzel & Matto, 2009). As such, this research attempts to investigate factors affecting parental aspirations, namely externalizing behaviours in adolescents and if this association differs by SES.

Despite the recognized importance of tertiary education, Australia is lagging behind in educational development. According to the Organization for Economic Co-operation and Development (OECD), Australia is now ranked 9th out of 30 in our proportion of 25 to 34-year olds with university degree qualifications, down from 7th a decade ago (Bradley, Noonan, Nugent & Scales, 2008). Increasingly, studies have shown that there is a widening gap in university participation between students from low, medium and high SES backgrounds (Sellar, Gale & Parker, 2011). Young adults from medium and high socioeconomic status (SES) are over-representing the student population in universities, with only an estimated 15 per

cent of youth from low SES representing the total domestic student population, compared to 46 per cent of medium SES and 38 per cent of students from high SES backgrounds (James, 2008). The Bradley Review has called for a major push towards universal participation in local universities, with targets to increase the percentages of low SES students to 20 per cent to more accurately represent the population (Bradley et al., 2014).

Along with this revelation of a widening participation gap came the sobering advice for Australia to increase proportions of its highly-skilled workforce or risk falling even more behind on the global platform (Sellar et al., 2011). Reports on the economic development of Australia shows that 70 per cent of new jobs created between 2005 and 2010 were in highly skilled professional and managerial occupations, compounding the urgency to reduce the participation gaps in universities (Chesters & Watson, 2012). It is not only crucial that low SES populations be targeted in initiatives to benefit the economy, but also to benefit themselves individually. Discourses in higher education have shown that having a university degree consequently leads to higher paying jobs and better job satisfaction. Studies have shown that individuals with university degrees earn 66 per cent more than high school graduates and are 50 per cent more satisfied (Murray, 2009; Archer & Hutching, 2000; Baum, Ma & Payea, 2010). Engaging in university education confers individuals the skills and ability to improve their life chances, and provide means for social and economic mobility (Walpole, 2003).

The Australian Government has developed initiatives that target students' educational aspirations in an attempt to bridge the widening participation gap between low and medium/high SES student populations. One example is the Murdoch's University Aspirations and Pathways for University (MAP4U) project,

which focuses on raising students' educational aspirations in the Southern corridor of Perth (Rockingham, Kwinana/Peel). This is in response to studies indicating that this region has one of the lowest university degree attainment rates in Western Australia, with only an estimated 17 per cent of people from Rockingham possessing tertiary qualifications, 14 per cent in Kwinana and 15 per cent in Mandurah in 2011 (Australian Bureau of Statistics, 2016). These rates are significantly lower than that of the national university completion rate of 26 per cent in Western Australia, with unemployment rates in these regions averaging around six per cent and youth unemployment rates as high as 17 per cent (Australian Bureau of Statistics, 2016; Prodonovich, Perry & Taggart, 2014). As such, the MAP4U initiative has developed a number of outreach programs that aid in the development and increment of student educational aspirations. MAP4U is also involved in research targeted at investigating aspirations in relation to university attendance.

Externalizing Problems, Educational Aspirations, and University Attendance

While current research and interventions to increase university attendance usually focus on "typical" children or adolescents of low SES backgrounds, adolescents with externalizing problems are often ignored or overlooked in the literature (Moulton, Flouri, Joshi & Sullivan, 2015; Arnold, 1997). This is despite the fact that 20 per cent of youths in Australia exhibit externalizing symptoms with 40 per cent of them occurring in low SES populations (Australian Government Department of Health, 2000). Currently, their university participation rates are not known, although studies have indicated that the economic impact of mental disorders on unattained university education is substantial (Breslau et al., 2008). With the current focus to increase university participation rates among low SES youth, the relationship between adolescents with externalizing problems and university

attendance should be investigated to provide a well-rounded picture of university education participation in Australia.

Studies have suggested that externalizing problems occur more frequently and at a higher rate in populations with low socioeconomic status (Arnold, 1997; Huisman et al., 2010). According to a survey done by the Australian Government Department of Health, approximately 40 per cent of youth engaging in problems behaviours are living in a household earning less than AU\$580 per week (2000). The frequency of adolescents with externalizing symptoms reduced by half in household earning twice the income, at AU\$1060 (AGDH, 2000). Studies investigating the developmental trajectories of externalizing problems indicate that stressors associated with low SES possibly leads to children and adolescent engaging in aggressive behaviours (McLeod & Kaiser, 2004; Aneshensel & Sucoff, 1996).

In order to further our understanding of the effects of externalizing problems, it is crucial to have an understanding of what they are. Externalizing problems consists of disinhibited behaviours characterized by outright disobedience, aggression, impulsivity and hyperactivity (Aunola & Nurmi, 2005). Extensive research has revealed stable and persistent trajectories of violence and aggression that continue to adulthood (Henricsson & Rydell, 2006). Children who display aggressive behaviours at a young age are at greater risk of becoming severe offenders and have been associated with a multitude of negative adult outcomes, such as adult criminality (Thompson, 2011; Henricsson & Rydell, 2006).

Notably, strong associations between externalizing problems and school failures have been reported, with one study implicating externalizing problems in the early termination of schooling across four central milestones: primary school graduation, high school graduation, college entry and college graduation (Breslau et

al., 2008). Their lack of academic success could be attributed to disengagement in academia. In a study examining explanatory mechanisms involved in externalizing problems and educational achievement, McLeod and Kaiser (2004) theorized that children with externalizing problems engage in *lagged effect*, characterized by a "lack of impulse control, inability to persist in problem-solving and playful competence" (p. 652). This impact hinders their learning from young and influences their engagement and success at each stage of their academic career, reducing the possibility of their attendance in university (McLeod & Kaiser, 2004).

Recent studies have also hinted at the reciprocal relationship between externalizing problems and engagement in the academic domain over time, with school disengagement predicting delinquency, substance use and other externalizing behaviours (Zhou, Main & Wang, 2010; Henry, Knight, Thornberry, 2012). More specifically, the lagged effect that characterizes externalizing behaviours may have resulted in academic failures that lead to resentment and frustration, which, in turn, results in a disinclination towards the school that may further reduce their engagement and promote externalizing behaviours (Zhou et al., 2010).

Furthermore, aspects of behavioural problems exert an effect on the people in close proximity, such as teachers, that reinforce their disengagement from the academic domain (Veldman et al., 2014). Teachers may be prompted to remove children and adolescents displaying behavioural problems from the classroom which may lead to reduced support and teaching with the consequence of continued academic disengagement and failure (Arnold, 1997; Henricsson & Rydell, 2006). With their academic success hindered, the opportunities available to them to attend university are further constrained (Dubow, Boxer & Huessmann, 2010).

Adolescents' resentment at consistent academic failures may have a long-lasting impact through its effect on their educational aspirations (Boxer, Goldstein, DeLorenzo, Savoy & Mecado 2010; Moulton et al., 2015). Within the literature, educational aspirations of students have been hailed as one of the most, if not the most, important predictors of educational attainment (Berzin, 2010). Students form imagined versions of themselves as they endeavour to achieve, which forms the basis of their expectations and decision-making process that impact upon the choices that they make (Rutherford, 2015; Bowden & Doughney, 2009). Before continuing further, it is important to emphasize that expectations are distinct from aspirations. Aspirations are ideal goals that individuals would like to accomplish and can often be a motivation to achieve (Jacob, 2010). In contrast, expectations are grounded in reality and consists of beliefs about the possibility or probability of succeeding in one's ambitions (Rutherford, 2015).

The recent emphasis on educational aspirations represents a shift in the way aspirations are conceptualised. Institutions now recognize that aspirations cannot solely account for whether people want something, but whether or not people are able to get what they want (Sellar et al., 2011). Appadurai's theory of navigational capacity has been used in relation to the fact that all students, regardless of SES, aspires (2004). In light of current trends of globalization, more people from various backgrounds are able to imagine more "diverse sets of futures" in accordance with dominant, national aspirations (Sellar et al., 2011, p.45). The ability to imagine future selves have led to research that debunks the idea of "poverty of aspirations" among disadvantaged students (Sellar et al., 2011; Bok, 2010).

While studies investigating educational aspirations of adolescents with externalizing problems are limited, studies available have suggested academic

disengagement and behavioural problems may lead to lowered educational aspirations. It could be that externalizing problems pose an additional constraint that form barriers to university education and subsequent occupational goals, which may limit their aspirations for university education (Berzin, 2010; Creed, Conlon & Zimmer-Gembeck, 2004). However, the intrinsic relationship between aspirations and environment implies that students own perceived achievement and engagement are not the only factors that affect their aspirations. Notably, parental aspirations have been implicated as a strong determinant of students' educational aspirations.

Parental Aspirations and Externalizing Problems

Strong associations have been made between students' educational aspirations and parents' aspirations for their child, surpassing those of peers and accounting for more than 40 per cent variance in adolescents' aspirations (Spera et al., 2009). Parents convey expectations through their aspirations, which can be defined as "standards of performance that organize, communicate and direct parent's behaviours toward their child" (Spera et al., 2009, pg. 1140; Buttaro, Battle & Pastrana, 2010). Research has identified parental aspirations as one of the four dimensions of parental involvement and a key determinant in shaping their child's aspiration (Spera et al., 2009; Jacob, 2010; Sosu, 2014). Studies have thoroughly investigated the effects of parental aspirations on their child's aspirations, and have found support for theories involving the concept of a "self-fulfilling prophecy", where aspirations drive decisions involving students' education that may contribute toward higher academic achievements (Sosu, 2014). As parental aspirations are conveyed through expectations and behaviour, students' motivation and drive to succeed increases, leading to the inference that higher parental aspirations are

associated with academic success and attendance at university (Rutchick, Smyth, Lopoo & Dusek, 2009; Sosu, 2014; Reed, 2012).

The importance of parental aspirations has been thoroughly addressed in the literature. However, the effects on parental aspirations have largely been ignored (Reed, 2012). It is still relatively unclear how parental aspirations operate, and the factors that are known to influence it are limited (Reed, 2012). This gap is surprising considering its' importance in the literature concerning students' university education.

It is yet unknown if parental aspirations, like students' educational aspirations, are evenly held (Appadurai, 2004). Applying Appadurai's theory contends that parental aspirations, like students' educational aspirations, should be held relatively even across various factors because, undeniably, most parents want their child to succeed. In light of current trends of globalization, more people from various backgrounds are able to imagine more "diverse sets of futures" in accordance with dominant, national aspirations (Sellar et al., 2011, p.45). The ability to imagine future selves have led to research that debunks the idea of "poverty of aspirations" among disadvantaged students (Prodonovich et al., 2014).

The same can be applied to parental aspirations. Appadurai contends that aspirations are not formed individually, but are an echo of our culture and environment (2004; Prodonovich et al., 2014). The importance of university has been heavily ingrained within our society and has become a dominant conceptualisation of success and is intricately linked to the concept of a "good life" (Prodonovich et al., 2014, p. 179). As members of society, parents would have ingrained this into their imagined realities, and as such aspire for their child to attend university, regardless of the presence of externalizing problems.

However, the available research postulates that parents' aspirations for university education may be lower for students with behavioural problems (Rutchick et al., 2009; Sosu, 2014). In one of the few studies conducted on parental aspirations, Sosu found that externalizing problems in children and adolescents affects mothers' behaviour, and as such, leads to lowered educational aspirations in mothers (2014). In another study by Rutchick and colleagues, they investigated parental expectations for children with externalizing problems (2009). While this study's hypothesis involves parental expectations, the direction of effect should be similar (Sosu, 2014). Rutchick and colleagues found that behavioural problems negatively influence parental appraisals of their child's ability to succeed in academic fields despite the fact that some children had adequate academic achievements in the past (2009). Rutchick and colleagues argue that behavioural problems are viewed as a persistent underlying disposition that permeates all other aspects of a child's disposition and leads to the assumption that exhibiting behavioural symptoms and achieving in the academic domain are not compatible (2009). These attitudes and beliefs carried by parents may be internalized by children and adolescents, which reinforces their negative behaviour and contribute to a cycle of low aspirations (Sosu, 2014).

Furthermore, students' own educational aspirations may already be limited by the barriers perceived to be created through academic failures which may impact on parents' own educational aspirations for their child (Boxer et al., 2010). This may create a cycle of low aspirations in which parental aspirations are affected by behavioural problems, which in turn results in low educational aspirations in students that may further deflate school disengagement and promote externalizing symptoms. As such, in the current climate of increasing aspirations, it would be both

interesting and imperative to explore the effect of externalizing problems on parental aspirations.

Neighbourhood Opportunity Beliefs and Parental Self-Efficacy

For results to fully capture the effect of externalizing problems on parental aspirations, a number of factors were included in the study to control for variance in the outcome. Neighbourhood opportunity beliefs and parental self-efficacy have both been hypothesized to influence parental aspirations (Pimlott-Wilson, 2011; Wentzel, 1998).

Neighbourhood opportunity beliefs refer to parents' belief about the opportunities that are available within the community. Appadurai suggests that aspirations are ideal goals of possible futures, and are principally influenced by social and cultural factors and are "framed in the thick of social life" (2004, p. 67; Bok, 2010; Sellar et al., 2011). The influence of neighbourhoods on parental aspirations is operationalised in one of two ways: the community norms and beliefs of the area, and the resources available to the local community, such as schools and other services (Brooks-Gunn, Duncan, Klebanov & Sealand, 1993).

Neighbourhoods are akin to social networks with their own set of practices and beliefs and as such, are implicit in the development of aspirations (Brooks-Gunn et al., 1993). Studies have indicated that a reciprocal relationship exists between neighbourhood beliefs and residents' values. Neighbourhood community norms often have an effect on people's attitudes and beliefs through the environment as well as through social interactions with other adults in the area (Caughy, Brodsky, O'Campo, Aronson, 2001). Conversely, people who have similar behaviours, attitudes, values, as well as occupational aspirations for their child often congregate in an area that reflect local market labor (Mookherjee, Ray & Napel, 2010).

Additionally, the resources available to the area may also be influential in shaping aspirations (Ellen & Turner, 1997). Availability of resources in the form of information, services and opportunities all have a role to play in how people imagine their future selves (Sellar et al., 2011; Ellen & Turner, 1997). Interactions with people who have been to university are important resources that strengthens their capacity to navigate imagined landscapes of their futures (Jargowsky & El Komi, 2011; Jensen & Seltzer, 2000). Parents living in better neighbourhoods may view university attendance as a well-trodden path due to the frequency of people with university degrees. The combination of influences of local norms and accessibility of resources may predispose parents to aspire to occupations that are more appropriate to local community (Pimlott-Wilson, 2011).

Studies into neighbourhood factors have also highlighted its effects on behavioural problems. The effects of the neighbourhood have been shown to influence individual variations in conduct, over and above individual and parental characteristics, and are particularly more pronounced for externalizing problems than internalizing problems such as anxiety, inhibition, and fearfulness (Edwards & Bromfields, 2009; Boyle & Lipman, 2002). Studies reported that between two to nine percent variation in self-report assessment of behavioural problems can be attributed to neighbourhood differences (Kalff et al., 2001; Aunola & Nurmi, 2005). Adults in the community serve as role models, and interactions with adults who are attending or who have been to university encourages and emphasizes the importance of education (Jensen & Seltzer, 2000).

Parental aspirations may also be influenced by parental self-efficacy. Parental self-efficacy refers to the parent's belief in his or her ability to positively affect the child and foster their development and success (Ardelt & Eccles, 2001). Studies have

shown that parental self-efficacy is a strong, independent predictor of parental aspirations for academic success (Wentzel, 1998). When parents are highly self-efficacious, they have more faith and confidence in his or her ability to encourage and support their child in their academic pursuits, which, in turn, increases the child's own academic self-efficacy (Meunier, Roskam & Browne, 2010). This is particularly pronounced for children with behavioural problems: having confidence in one's abilities increases the confidence that they are able to manage and support their child with externalizing symptoms (Meunier et al., 2010). Additionally, parental self-efficacy has shown to mediate the relationship between parental aspirations and students' academic development (Bandura et al., 2001). Having higher perceived self-efficacy raises parent's confidence and subsequently their aspirations and further encourages them to engage in parenting practices that promote academic success in their child (Bandura et al., 2001).

Parental Aspirations and SES

Studies have indicated that SES is one of the strongest determinants of parental aspirations for their child's educational goals. Appadurai contends that aspirations are more strongly developed for advantaged groups (2004; Sellar et al., 2011). Parents from high SES backgrounds are more familiar with the cultural landscape that involves dominant conceptualisations of aspirations, such as university education (Sellar et al., 2011). They have more access to "social, cultural and economic resources that enable more frequent experiments and experiences of articulating and successfully pursuing their aspirations" (Sellar et al., 2011, pg.46). This means that the differential resources available to high SES parents afford them more opportunities to realize their aspirations much more easily.

One of the most valuable forms of resources afforded to parents that aid in the pursuit of their child's educational goals is knowledge. Smith explains that two types of knowledge are available, *hot* and *cold* knowledge. *Hot* knowledge refers to verbally transmitted information that is usually embedded within the web of social networks (2011). In neighbourhoods with lower numbers of university attendees or graduates, these social networks would be less conducive for university educational pursuits, and as such, parents who rely on *hot* knowledge remain in the dark about the full benefits of education, and the various pathways to university (Smith, 2011; Johnston, Lee, Shah, Shields & Spinks, 2014). Alternatively, *cold* knowledge refers to formal knowledge that is based on facts and may include information that is generated by universities and institution (Smith, 2011). Smith contends that high-income parents are more likely to based their choices and decisions on *cold* knowledge, as they have a higher appreciation for the benefits of university education (2011; Davidoff & Leigh, 2008). This inclination towards university education may manifests itself in higher parental aspirations that drive their behaviour and decisions (Sosu, 2014). For example, exhausting the resources needed to ensure that the child achieves academically and sending them to better schools that highlight university as a viable option after graduation (De Graaf, De Graaf & Kraaykamp, 2000; Holloway & Pimlott-Wilson, 2011).

The differential allocation of resources also points to a differential response in parents of students with externalising problems. The literature suggests that parents from disadvantaged backgrounds may not retain their high aspirations for their child with externalizing problems because their lack of resources not only impacts upon their self-efficacy as parents, but also their capacity to aspire (Luthar & Ansary, 2005; Prodonovich et al., 2014). Their belief that the problems faced by

the child would impede their academic achievements may become all-encompassing, and without any available additional resources to help, such as school counsellors and therapy, their aspirations may be lowered (Rutchick et al., 2009). In contrast, high SES parents may draw confidence from their easy access to resources to retain their aspirations for their child, even when they are exhibiting behavioural problems that may present as an obstacle to their pathways towards university (Luthar & Latendresse, 2005). Their abundance in resources and knowledge of the system gives them the assurance that the “issue” of their child’s behavior can be “fixed.” As such, while students at both ends of the SES spectrum may engage in deviant behaviour, it is much more likely that these behaviours result in long-term consequences and lowered aspirations for those of low SES backgrounds (Luthar & Ansary, 2005).

The Present Study

Very little is currently known about the way in which parental aspirations are operationalised in light of externalizing problems. Given the importance of parental aspirations as a factor in students’ pathways to university, it is thus this study’s aim to investigate the effects of externalizing problems on parental aspirations.

New discourses in aspirations has postulated that aspirations are relatively evenly held. Appadurai suggests that the ability to imagine future landscapes have diversified in response to increasing trends of globalization (Appadurai, 2004). However, it is unclear if parental aspirations for their child with externalization problems would continue in this trend. Previous research has indicated that it in fact might be lower due to the perceived incompatibility between behavioural problems and externalizing problems (Sosu, 2014; Rutchick et al., 2009). Based on previous research conducted, this study hypothesizes that externalizing problems would result in lower parental aspirations.

Secondly, it is theorized that due to differential resources available to parents, SES would have a moderating effect on the association being investigated (Smith, 2011). Specifically, that the effect would be stronger for parents from low SES populations. This study hypothesizes that the low SES parents would have lower aspirations for their child with externalizing problems.

Methods

Design

This study used a cross-sectional design. This is a self-reported survey administered to parents to assess parent's opinions about their own involvement in their child's education and their expectations and aspirations for their child after high school.

Participants

Participants were drawn from the Murdoch Aspirations and Pathways for University (MAPP4U) project, a longitudinal project investigating student aspirations and implementing programs to increase university attendance rates in the Southern region of Perth, Western Australia. This year the focus of the project was on parent perspectives, and data was collected from various avenues, such as a tuition centre, sporting events, parent workshops, and various Facebook groups. The sample comprised 142 participants ranging from 30 to 64 years old, with approximately 57 per cent of participants in the age bracket of 40 to 49. Of the 142 participants, 123 were female (86.6%). Demographic information is shown in Table 1 below.

Table 1

Demographic Statistics of Participants (N = 142)

| Characteristics | N | Sample |
|---|-----|--------|
| | | % |
| Education Level | | |
| University | 43 | 35.8 |
| TAFE | 41 | 34.2 |
| High School | 15 | 12.5 |
| None | 21 | 17.5 |
| Age | | |
| 30-34 | 10 | 7 |
| 35-39 | 20 | 14.1 |
| 40-44 | 40 | 28.2 |
| 45-49 | 41 | 28.9 |
| 50-54 | 21 | 14.8 |
| 55-59 | 8 | 5.6 |
| 60-64 | 1 | 0.7 |
| Language Spoken | | |
| English | 137 | 96.4 |
| Other | 3 | 2.1 |
| Marital Status | | |
| Married and living together | 77 | 54.2 |
| Married but one works a lot | 14 | 9.9 |
| Living together in a marriage-type relationship | 15 | 10.6 |

| Table 1 continued | <i>N</i> | % |
|---|----------|------|
| Separated/Divorced | 10 | 7 |
| Single/sole parents | 15 | 10.6 |
| Widowed/widower | 2 | 1.4 |
| Place of Birth | | |
| Australia | 92 | 64.8 |
| Other | 49 | 34.5 |
| Ethnicity | | |
| Australian/English/Irish/Scottish/European/ | 128 | 90.1 |
| Aboriginal/Torres Strait Islander | 3 | 2.1 |
| Asian | 3 | 2.1 |
| New Zealander Maori | 2 | 1.4 |
| Other | 5 | 3.5 |
| Oldest child in School | | |
| Year 7 | 10 | 7 |
| Year 8 | 19 | 13.4 |
| Year 9 | 20 | 14.1 |
| Year 10 | 27 | 19 |
| Year 11 | 14 | 9.9 |
| Year 12 | 42 | 29.6 |

Notes. When sample totals are <142, data are missing.

Measures

Participants completed the Parent Murdoch Tertiary Aspiration Survey (MTAS) 2016 (see Appendix A) as part of MAP4U's longitudinal research. The items used for this report were adapted from the original Student MTAS, Aspirations

Survey (Parents; BritainThinks, 2013), the Michigan Study of Adolescent and Adult Life Transitions (MSALT), Student Voice/Teacher-Student Relationship Scales (Appleton, 2006; WKCD Inc., 2011) and the Collective Self-Efficacy scale (Goddard, 2002). Only items relating to parental aspirations, externalizing problems, parental self-efficacy, neighbourhood opportunity beliefs, SES, and demographics were used for this study.

Demographics Background. The demographic information comprised of gender, age, income, and education level. Participants were given three options for level of education: high school, TAFE or University and answered yes or no for each option. Participants were also asked the total of all wages/salaries, government benefits, pensions, allowances and other incomes they usually receive and was coded in a range: \$1-199 per week (\$1-\$10,399 per year), \$200-299 per week (\$10,400-\$15,599 per year), \$300-399 per week (\$15,600-\$20,799 per year), \$400-599 per week (\$20,800-\$31,199 per year), \$600-799 per week (\$31,200-\$41,599 per year), \$800-999 per week (\$41,600-\$51,999 per year), \$1,000-1,249 per week (\$52,000-\$64,999 per year), \$1,250-1,499 per week (\$65,000-\$77,999 per year), \$1,500-1,999 per week (\$78,000-\$103,999 per year), \$2,000 or more per week (\$104,000 or more per year). Participants were also asked to select options that applied to their cultural and ethnic background: Australian/English/Irish/Scottish/European/America; Aboriginal/Torres Strait Islander, Asian, Middle Eastern/Arabic, African, New Zealander Maori or Other (in which case they were asked to specify).

Externalizing Problems. Externalizing problems was measured with ten items adapted from the Strengths and Difficulties Questionnaire for Parents (SDQ - P, Goodman et al., 1997). SDQ is a brief screening measure that identifies behavioural and emotional problems in children and adolescence and consists of five

subscales (Hawes & Dadds, 2004). The ten items comprised of two subscales, Conduct and Hyperactivity, and was measured on a three-point scale with labels of *not true* = 0, *somewhat true* = 1, and *true* = 2. Items include: “often has a temper tantrum”, “often fights with other children”, “often lies or cheats”, “steals from home, school or elsewhere”, “restless, overactive”, “constantly fighting or squirming”, and “easily distracted, concentration wanders”. Three items were reverse coded: “generally obedient”, “thinks things out before acting”, “see tasks through to the end”. Scores ranged from 0-20, with 0-7 indicating the normal range, 8-9 borderline and 11-20 indicating the abnormal range. SDQ reported moderate to strong inter-rater reliability in the externalizing problems subscale and sound stability and external validity in an Australian population (Hawes & Dadds, 2004).

Parental Aspirations. Four items measured parent’s aspirations for their child using a six-point Likert scale ranging from 1 = *Strongly disagree*, 3 = *Neither disagree nor agree* to 7 = *Not applicable*. Participants were asked to rate on a scale what they want their child to go into, University, TAFE, Other higher education or Fulltime work after high school.

Neighbourhood Opportunity Beliefs. This construct was measured using two items: “There aren’t enough opportunities for my child in this region” and “In reality there are so few opportunities for children like mine that they are unlikely to be able to pick and choose what they do for a living.” Items were measured using a Likert scale containing six options (1 = *Strongly Disagree* through 6 = *Strongly Agree*). The two item scale reliability was shown to be strong ($\alpha = 0.83$).

Parental Self-Efficacy. Parental self-efficacy was measured using seven items: “I do an adequate job helping my child with school work”, “I am probably more helpful to my child when it comes to homework than other parents are”, “I am

involved in my child's schooling as much as possible", "I am sure my child knows I am interested in their life at school", "I am good at helping my child work through school problems". Items were measured on a six-point Likert scale (1 = *Strongly Disagree* through 6 = *Strongly Agree*). Two items were reversed scored: "Helping my child with their school work is frustrating" and "I am not as involved in my child's education as I think I should be". Scale reliability was shown to be adequate ($\alpha = .78$)

Parental SES. As SES generally unobservable, proxy measures such as education level and income are required (Australian Bureau of Statistics, 2011). Parental SES in this study was measured by combining the parental level of education and income to create a single summary index (Australian Bureau of Statistics, 2011). SES was coded in a range from 0-12. Each income range was coded a number from 0 (\$1-199 per week, \$1-\$10,399 per year) to 9 (\$2,000 or more per week, \$104,000 per year). Education level was also coded a number from 0 (did not finish high school) to 3 (finished university). A new variable was then created by adding the two variables.

Procedure

Before collecting data, ethical clearance and approval to conduct the research were obtained from the Murdoch University Human Research Ethics Committee (Appendix B). Data was collected from various avenues, described below. All parents were provided with an information letter (Appendix C) containing details of the survey, and were required to provide written consent before participating in the survey. The information letter also reminded parents that participation is voluntary and they are at liberty to withdraw from the survey at any time. A prerequisite of participating in the survey was having a child currently attending high school. The

survey was conducted via an online software called SurveyMonkey. Participants were able to return to the survey at any point of the survey, and did not have to complete the survey in one sitting. The survey was open for 9 weeks on Survey Monkey. Reminder emails were sent out three times over the 9-week period.

Sporting events. Representatives of various sports clubs in Rockingham/Peel/Kwinana region were contacted via phone. Of 12 groups contacted, two clubs responded and expressed interest in supporting the distribution of our survey. A total of 13 parents were surveyed.

Tuition centres. Five tuition centres in Rockingham/Kwinana/Peel region was contacted via email (Appendix D) and one responded. Permission was obtained to distribute our survey to the parents of secondary students on their database. Specific links from Survey Monkey were sent out to 213 emails and a total of 21 parents responded.

Facebook group. Administrators of nine Facebook groups were also contacted and permission was requested to post survey links on their Facebook pages (Appendix E). Posts on Facebook groups were regularly “boosted” to improve the visibility of our posts. A total of 75 parents responded.

PACTS workshop. The Parents As Career Transition Support (PACTS) Workshop has an existing relationship with MAP4U. As such, MAP4U research manager facilitated a relationship between the members involved in the study and PACTS coordinator. Permission was granted to distribute survey links to 90 emails addresses provided. A total of 33 responses were collected.

Aggregated data collected is stored in locked cabinets and password protected computers at Murdoch University. Survey results on SurveyMonkey were

also password protected. When data was downloaded, it was stored on a password-protected share drive, only accessible by senior project researchers.

Results

Analysis Plan

In order to address the aims of this study, a series of analysis are conducted. Firstly, the bivariate correlations are examined followed by Moderated Multiple Hierarchical Regression (MMHR). MMHR has been cited as the preferred statistical method to detect moderating effects when the predictor and moderator variable is measured on a continuous scale (Aguins, 1995; Frazier, Tix & Baroon, 2004). This analysis was conducted with parental aspirations as the dependent variable; parental self-efficacy and neighbourhood opportunity beliefs as the control variables; externalizing problems and SES as the independent variable and SES as the moderator. The existence of a moderating effect (SES) suggests that the relationship between parental aspirations (outcome) and externalizing problems (predictor) varies as a function of the SES (Aguins, 1995).

MMHR consist of comparing at least two least-squares regression equations, in which differences in sample values between an additive model (with predictor variables) and a non-additive model (including interaction term, which is created by multiplying independent variables with the moderator, EPxSES) are compared (Kromrey & Foster-Johnson, 1998). R^2 values, also known as the correlation determinant, allows us to determine the amount of variance explained by the model (Jaccard & Turissi, 2003). In other words, this approach to analyses examines the variance explained by the model over and above the variance explained by individual predictors (Cortina, 1993). The F statistics represents the ratio of

improvement in the prediction that results from fitting the model (Field, 2013). If the improvement in fitting the model is much greater compared to the inaccuracy within the model, the F value will be greater than 1. In addition, the significant value for the F -statistics will also be calculated in order to determine the probability of obtaining that F value by chance (Field, 2013). Furthermore, unstandardized beta (B) values and associated standard errors and confidence intervals were also reported. Beta values are compared to indicate individual predictor effect on the dependent variable, with the standard error indicating to what extent these values would differ across different samples (Field, 2013). Significant values of B suggest that the individual predictor contributes significantly to the model. The confidence intervals are boundaries for the beta values such that in 95% of samples these limits contain the true value of b (Field, 2013). Smaller gaps in confidence intervals are ideal, indicating that the value of B in this sample is closer to its true value. Finally, a significant interaction effect was further probed using simple slopes analyses.

Missing Data Analysis, Assumptions-Testing and Bivariate Correlations

The sample initially consisted of 142 parent respondents. Preliminary analysis indicated that significant data relevant to SES was missing ($n = 22$, 15.50%). The large numbers implied that the missing values are not random, and could be due to reluctance to disclose income or education. These cases are excluded from further analysis through listwise deletion. Visual inspection of remaining variables showed missing data of less than 10% (externalizing problems, 0.80%; parental self-efficacy, 2.50%), which supports the use of imputation (Scheffer, 2002). Expectation-maximisation method was performed.

The predictors variables are also centered and weighted. Centered data is essential as this study's analysis included a moderator and in order to create

meaningful zero points for accuracy of the constant in the regression model (Dalal & Zickar, 2012; Kramer & Blasey, 2004). This was done by subtracting the means for each value for each variable, creating transformed variables with a mean of zero (Fields, 2013). The data is also weighted by a ratio of eight to reduce response bias as visual examination of data indicated that responses from females far outweighed responses from males (Fraser, Tix & Baron, 2004). Final sample size is 211 respondents, 106 males (50.20%) and 105 females (49.80%). Both weighted and unweighted data are included for comparison.

Prior to conducting the analysis, the relevant assumptions of this statistical analysis was tested. Analysis of standard residuals indicated that no outliers were identified (Std. Residual Min = -2.27, Std Residual Max = 2.10). Tests for collinearity also indicated that the assumption of little or no collinearity was satisfied, as Tolerance was more than .1 and VIF was less than 10 for all variables. To test for independence of observation in data, the Durbin-Watson test for serial correlation was performed and a relatively insignificant value of .90 was obtained. The observed value was less than two, which signifies some autocorrelation. As our data does not involve a time-series, the value of Durbin-Watson test would not indicate significant positive correlation (Bruin, 2006). Visual examinations of scatterplots revealed that assumptions of homoscedascity and linearity have been met (Osborne & Waters, 2002). The data also met the assumptions of non-zero variances.

Finally, a visual inspection of scatterplots concluded that some of the data was not normal (Ghasemi & Zahediasl, 2012). As such, bias-corrected (BCa) bootstrapped estimates were derived (1000 samples) to provide robust results of significance. Bootstrapping is an approach that estimates standard errors in

regressions without making any assumptions about the distribution of the data (Byrne, 2013). This is done by resampling the participants' multiple times to simulate what might happen if the entire population were to be sampled (ter Braack, 1992).

The descriptive statistics for independent and dependent variables and Pearson's correlation coefficients of both unweighted and weighted data are shown in Table 2 and 3 below. Descriptive statistics for externalizing problems and SES indicated that the sample was slightly skewed, indicating that the sample consisted of mothers and fathers from high SES backgrounds ($M = 8.19$, $SD = 3.05$) and had children at the lower end of the externalizing problems scale ($M = 3.79$, $SD = 2.41$), further supporting the use of bootstrapping as a method to correct for non-normal data.

Unweighted correlations table indicate that low correlations exists for predictor and criterion variables. As expected, the strongest correlation was shown for externalizing problems and parental self-efficacy, indicating that more self-efficacious parents reported less externalizing problems. Additionally, there was significant positive correlations between neighborhood opportunity beliefs and parental aspirations, and externalizing problems, both of which were expected. Parental self-efficacy was also positively correlated with neighborhood opportunity beliefs, indicating that better opportunities parents' perceived in the neighborhood correlated with their self-efficacy. Finally, the interaction term was negatively correlated with parental aspirations, and positively correlated with parental self-efficacy.

While correlations in the weighted table were also low, the effect sizes are much stronger with stronger significant values. This supports the use of weighted

Table 2.

Bootstrapped Unweighted Bivariate Correlations Table of the Effect of Externalising Problems on Parental Aspirations, Moderated by SES, with Control Variable Parental Self-Efficacy and Neighbourhood Opportunity Beliefs.

| Variables | 1. | 2. | 3. | 4. | 5. | 6. | Means | SD |
|--------------------------------------|-------|--------|------|------|------|----|-------|-------|
| 1. Parental Aspirations | - | | | | | | 3.38 | .86 |
| 2. Externalising Problems | .08 | - | | | | | 3.79 | 3.41 |
| 3. SES | .08 | -.04 | - | | | | 8.19 | 3.05 |
| 4. Parental Self-Efficacy | .14 | -.26** | .17* | - | | | 3.63 | .59 |
| 5. Neighbourhood Opportunity Beliefs | .16* | .19* | -.10 | -.02 | - | | 2.74 | 1.04 |
| 6. EPxSES | -.20* | .15 | -.06 | .16* | -.02 | - | -.38 | 10.09 |

Note. EPxSES = Interaction term of externalizing problems and socioeconomic status.

p<.05. **p<.01. *p<.001.*

Table 3.

Bootstrapped Weighted Bivariates Correlations Table of the Effect of Externalising Problems on Parental Aspirations, Moderated by SES, with Control Variable Parental Self-Efficacy and Neighbourhood Opportunity Beliefs.

| Variables | 1. | 2. | 3. | 4. | 5. | 6. | Means | SD |
|--------------------------------------|---------|---------|--------|--------|-------|----|-------|-------|
| 1. Parental Aspirations | - | | | | | | 3.10 | 1.04 |
| 2. Externalising Problems | .02 | - | | | | | 3.62 | 2.78 |
| 3. SES | -.15* | -.11 | - | | | | 8.34 | 3.06 |
| 4. Parental Self-Efficacy | .21** | -.35*** | .24*** | - | | | 3.59 | .62 |
| 5. Neighbourhood Opportunity Beliefs | .34*** | .06 | -.19** | .29*** | - | | 2.70 | .1.12 |
| 6. EPxSES | -.24*** | .12* | .04 | .06 | -.16* | - | -.94 | 8.08 |

Note. EPxSES = Interaction term of externalizing problems and socioeconomic status.

*p<.05. **p<.01. ***p<.001.

data in analyzing the hypotheses. As expected, the strongest correlation was found between parental self-efficacy and externalizing problems. Parental self-efficacy also correlated significantly with parental aspirations, SES, and neighborhood opportunity beliefs. Notably, the interaction term was negatively correlated with parental aspirations and externalizing problems.

Moderated Multiple Hierarchical Regression

The unstandardized coefficients, standard error, standardized coefficients and bootstrapped 95% confidence interval of both weighted and unweighted regression models are displayed in Table 4 below. The centered continuous variables are entered hierarchically. The control variables, parental self-efficacy and neighborhood opportunity beliefs, were entered at Stage 1, followed by the predictors, externalizing problems and SES in Stage 2, followed by the interaction term in Stage 3.

Similar to trends described in the correlations table above, analysis of weighted condition resulted in stronger effect sizes and significant p values. As larger sample sizes increase the power of statistical tests to detect significance, stronger p values were expected (Button et al., 2013). Further increases in effect sizes suggests that simulation of responses from fathers may be driving the interaction.

In the unweighted condition, block one, which included parental self-efficacy and neighbourhood opportunity beliefs, accounted for five per cent of the variance ($R^2 = .05$) and was statistically insignificant, $\Delta R^2 = .05$, $F(2, 117) = 2.78$, $p = .07$. In block two, externalizing problems and SES were added to the model where it accounted for an additional one per cent of the variance in parental aspirations, $R^2 = .06$. This was also statistically insignificant, $\Delta R^2 = .01$, $\Delta F(2, 115) = .83$, $p = .44$. In

the next stage, the addition of the interaction term accounted for an additional 6 per cent of the variance. The addition of interaction term was significant, $\Delta R^2 = .06$, $R^2 = .12$, $\Delta F(1, 114) = 7.93$, $p = .01$. Collectively, the five predictors accounted for a statistically significant proportion of the variance in parental aspirations, $R^2 = .12$, adjusted $R^2 = .08$, $F(5, 114) = 3.11$, $p = .01$. When each predictor was examined individually, only parental self-efficacy and the interaction explained a significant proportion of variance in the model. One unit increase in parental self-efficacy resulted in a third units increase in parental aspirations, while one unit increase of the interaction term resulted in .02 unit decrease in parental aspirations.

In the weighted condition, block 1 accounted for 13 per cent of the variance, $R^2 = .13$, and was statistically significant, $F(2, 208) = 15.38$, $p < .001$. In block two, the addition of externalizing problems and SES accounted for an additional two per cent of variance, $R^2 = .15$. This increase was not significant, $\Delta R^2 = .02$, $\Delta F(2, 206) = 2.57$, $p = .08$. When the interaction term was added to the model, an additional five per cent of variance was explained, $R^2 = .20$ and was, significant, $\Delta R^2 = .05$, $\Delta F(1, 205) = 13.03$, $p < .001$. Altogether, the model significantly explained 20 per cent of the variance in parental aspirations, $R^2 = .20$, adjusted $R^2 = .18$, $F(5, 205) = 10.31$, $p < .001$. An examination of *B* coefficients indicated that all variables were significant predictors of parental aspirations, with an exception of externalizing problems. Parental self-efficacy emerged as the strongest predictor of parental aspirations, resulting in a .41 increase in parental aspirations for every unit increase if parental self-efficacy. Neighborhood opportunity beliefs and SES were also shown to be significant predictors of parental aspirations, resulting in .12 increase and .52 decrease respectively. Notably, the interaction term showed a significant, negative

Table 4

Bootstrapped coefficients for the Regression Model for Parental Aspirations

| | Weighted ^a | | | | Unweighted | | | |
|-----------------------------|-----------------------|-----------|----------------------------|-----------------------|-------------------|-----------|----------------------------|-----------------------|
| | <i>B</i> [95% CI] | <i>SE</i> | Bootstrapped 95% BCa CI | <i>R</i> ² | <i>B</i> [95% CI] | <i>SE</i> | Bootstrapped 95% BCa CI | <i>R</i> ² |
| Parental Aspirations | | | | | | | | |
| <i>Step 1</i> | | | | | | | | |
| NBO | .28 [.16, .41]*** | .06 | .15 - .42 | | .13 [-.02, .28] | .08 | -.01 - .28 | |
| PSE | .21 [-.02, .43] | .11 | -.00 - .41 | .13*** | .21 [-.05, .48] | .13 | -.06 - .50 | .05 |
| <i>Step 2</i> | | | | | | | | |
| NBO | .24 [.11, .37]*** | .07 | .11 - .38 | | .12 [-.03, .28] | .08 | -.03 - .28 | |
| PSE | .33 [.07, .58]* | .13 | .09 - .56 | | .23 [-.04, .51] | .14 | -.06 - .51 | |
| EP | .02 [-.03, .07] | .03 | -.03 - .06 | | .03 [-.02, .07] | .02 | -.03 - .07 | |
| SES | -.05 [-.10, -.00]* | .02 | -.09 - -.01 | .15 | .02 [-.03, .07] | .03 | -.03 - .07 | .06 |

Notes. NBO = Neighborhood Opportunity Beliefs. PSE = Parental Self-Efficacy. EP = Externalising Problems.

^a Weighted cases by gender. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4 continued.

| | Weighted ^a | | | | Unweighted | | | |
|----------------------|-----------------------|-----------|----------------------------|-----------------------|---------------------|-----------|----------------------------|-----------------------|
| | <i>B</i> [95% CI] | <i>SE</i> | Bootstrapped 95% BCa CI | <i>R</i> ² | <i>B</i> [95% CI] | <i>SE</i> | Bootstrapped 95% BCa CI | <i>R</i> ² |
| Parental Aspirations | | | | | | | | |
| <i>Step 3</i> | | | | | | | | |
| NBO | .19 [.06, .31]** | .07 | .06 - .33 | | .11 [-.04, .26] | .08 | -.04 - .26 | |
| PSE | .41 [.16, .66]** | .13 | .16 - .64 | | .32 [.05, .60]* | .15 | .00 - .60 | |
| EP | .04 [-.01, .09] | .03 | -.01 - .08 | | .04 [-.01, .09] | .02 | -.01 - .08 | |
| SES | -.05 [-.10, .01]* | .02 | -.09 - -.01 | | .01 [-.04, .06] | .03 | -.04 - .06 | |
| EP*SES | -.03 [-.05, -.01]*** | .01 | -.05 - -.02 | .20*** | -.02 [-.04, -.01]** | .01 | -.04 - -.01 | .12** |

Notes. NBO = Neighborhood Opportunity Beliefs. PSE = Parental Self-Efficacy. EP = Externalising Problems. EPxSES = Interaction term of externalizing problems and socioeconomic status.

^a Weighted cases by gender.

p*<.05. *p*<.01. ****p*<.001.

For full table see Appendix G.

association with parental aspirations, resulting in a .03 unit decrease in parental aspirations for every unit increase in the interaction term.

In order to further investigate the significant interaction term, a simple slopes analysis was conducted at two meaningful levels of SES that reflected a high frequency of respondents, 2.90 for low SES and 12.00 for high SES. Figure 1 shows the results of the interaction term on parental aspirations. It should also be noted that due to skewed sample size, the majority of our sample had normal levels of externalizing problems, resulting in relatively 'low' and 'high' values being plotted, despite the fact that these values were still within the normal ranged.

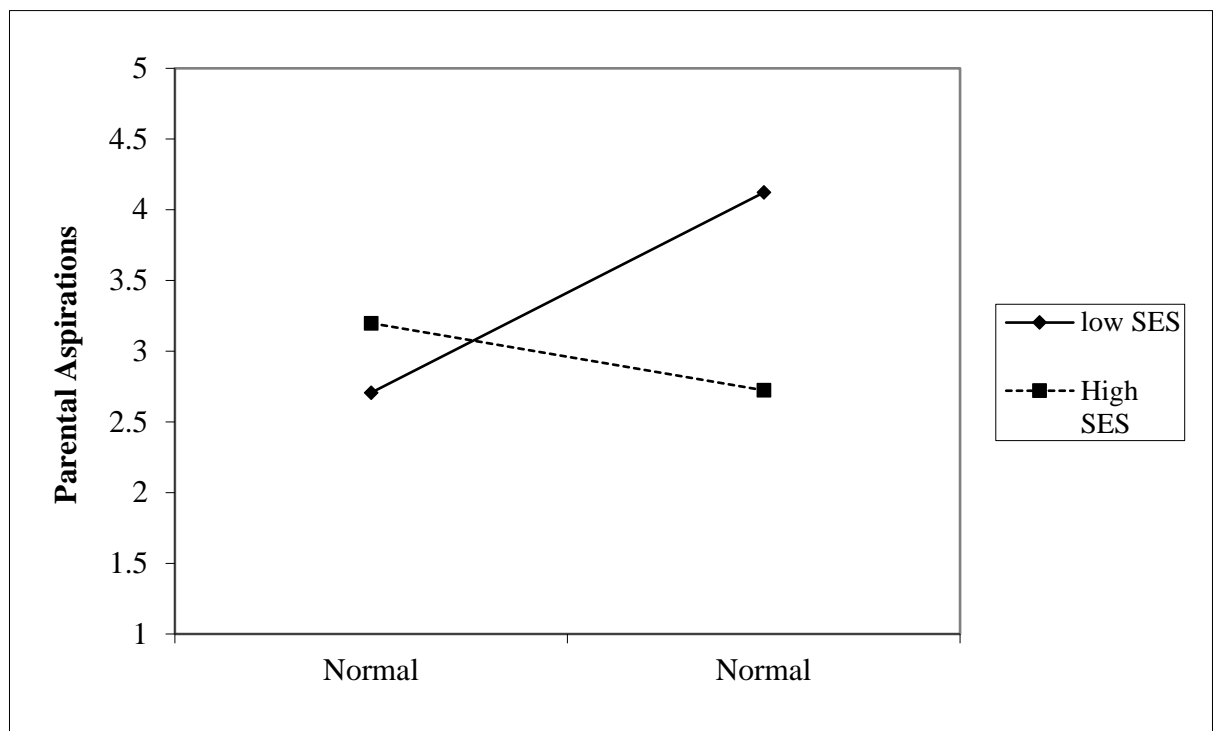


Figure 1. The two-way interaction effect for SES of the regression of externalizing problems on parental aspirations.

The graph suggests that for low SES populations, parental aspirations increased as externalizing problems increased, $\beta = .20$, $t(206) = 3.35$, $p < .01$.

However, no significant interaction was discovered in the high SES populations, $\beta = -.07$, $t(206) = .1.65$, $p = 0.1$

Discussion

The aim of this research was to investigate the effects of externalizing problems on parents' education aspirations for students in an attempt to contribute to efforts to reduce participation gaps in university. Additionally, this study wanted to examine the moderating effect of SES on the hypothesized association. The first hypothesis was not supported as results indicate that externalizing problems did not predict parental aspirations. Nonetheless, regression analysis revealed that SES did strengthen the influence of externalizing problems on parental aspirations. Upon closer examination, it was discovered that low SES parents had increasing levels of parental aspirations in response to their child's increasing externalizing problems. Conversely, our results suggest that externalizing problems did not influence parental aspirations in the high SES sample. Unexpectedly, the differences in the weighted and unweighted condition implied that fathers' may have a more important role to play in navigating the imagined landscapes of their child's educational goals than expected.

Appadurai's Theory of Navigational Capacity

The lack of support for the effects of externalizing problems on parental aspirations, while unanticipated, is still supported by research. More specifically, the results lend support for Appadurai's theory of navigational capacity. He argues that the ease of accessibility across all platforms—technology, national boundaries—and the availability of information has allowed for the proliferation of “diasporic public spheres,” which has vastly encouraged and enabled people to imagine more diverse sets of possibilities for their future (Appadurai, 2004, p. 53). As such, due to its

increasing dominance as a measure of success, attending university has been intricately embedded within students' aspirations. The findings of this study imply the same effect for parental aspirations. Due to increasing accessibility to imagined futures where their child attends university, parents may continue to aspire despite the fact that their child engages in externalizing problems (Prodonovich et al., 2014). However, the sample recruited in this study was skewed toward normal range of externalizing problems, thus limiting generalizability. As such, the generalizability of this finding should be interpreted with caution.

The fact that parents' aspirations for their child in high SES samples remains relatively invariant across increasing externalizing problems could provide further support for Appadurai's theory. These findings imply that in the high SES samples, parents continued to aspire for their child's future university attendance despite the severity of behaviour. In light of his contentions that globalisation has expanded the ability to imagine, Appadurai further notes that the unequal access to resources may result in differential capacities to aspire (2004; Prodonovich et al., 2014). Parents with high SES backgrounds are able to keep their aspirations relatively constant as they are confident in their easy access to resources to prevent behavioural problems from proliferating (Sellar et al., 2011; Luthar & Ansary, 2005). Their relatively high navigational capacity remains, despite perceived barriers in the form of externalizing problems.

Conversely, in the low SES populations, simple slopes analysis revealed an upward trend, indicating that in low SES parents aspire more for their child as more symptoms of externalizing problems are exhibited. This finding does not support the hypothesis as it was expected parental aspirations would lower in response to increasing levels of externalizing problems (Luthar & Ansary, 2005; Prodonovich et

al., 2014). This may reflect an aspiration-attainment gap and reveal even further the disparities in resources between parents of differing SES. Findings reflect the possibility that parents of low SES may lack knowledge and information, an invaluable resource that strengthens their capacity to aspire (Smith, 2011; Bok, 2010). Smith explains that parents from low SES background are more likely to lack this knowledge, or to have someone in their social circle with legitimate facts about university entrances (2011). Due to the comparatively few resources available to them, they may not fully comprehend the requirements of transitioning to university (Smith, 2011; Prodonovich et al., 2014). The aspiration-attainment gap could be exacerbated by parents own educational aspirations. The few studies investigating the factors affecting parental aspirations found that parents who had not met their own educational aspirations or are dissatisfied with their current occupation are more likely than respondents who did to have high educational aspirations for their children (Reed, 2012; Sheridan, 2012). Contrary to the myth of the “poverty of aspiration”, parents who have little experiences in university education do aspire to university for their child and their support for university education is essential for young people, particularly students from low SES (James, 2001; Schoon, Parsons & Sacker, 2004). Parents may be cognizant of the importance of university education by drawing inferences concerning their current job dissatisfaction and lack of educational experience and aspire highly for their child, despite the presence of externalizing problems.

Unexpectedly, results of the weighted and unweighted conditions indicated that the gender of the parent might play a role in shaping aspirations for their child’s university education. The findings suggest that fathers might contribute more heavily towards the aspirations involving their child’s educational future than mothers do.

Specifically, fathers' perception of their self-efficacy, their perception of current opportunities in the neighbourhood and their financial resources are shown to significantly influence parental aspirations as a unit. Research investigating effects on parents' gender has typically examined the role of the mother, as, traditionally, mothers have been more involved in their child's upbringing and nurturing (Sosu, 2014; Sheridan, 2012). However, changing gender roles within society have made it more acceptable, even expected, that fathers play a more nurturing role in their child's life (Abito, 2005; Yeung, 2001). Research, while limited, has suggested that having fathers who are active in their child's development may result in a multitude of positive outcomes, including academic achievement, cognitive development and social competence (Abito, 2005; Baron, 2010). The fact that this study's results reveal results that oppose assumed trends could suggest that the way in which fathers' view their contribution to their family is morphing from traditional patriarchs to fathers who are embracing the role of a parent and are more involved in their child's lives (Yeung, 2001). The increasing involvement of fathers may influence and increase aspirations, and may even result in fathers' aspirations bearing more weight in considerations regarding their child's future.

Strengths, Limitations, and Future Directions

There are a number of limitations in this study that restrict generalizations and interpretations. Despite vigorous efforts to ensure robust sample sizes, the number of respondents that completed the survey remained small, at 122 participants. Ideally, sample sizes should be large, exceeding 300 participants, in order to be powerful enough to detect effect sizes, significant interactions, and associations (Barlett, Kotrlik & Higgins, 2001). A large sample size would allow for more conclusions to be more confidently inferred and reduces the margin of

inaccuracy typically associated with Type I or Type II errors (Button et al., 2013). As the survey was only open for nine weeks, the size of the sample could be due in part to the small timeframe available in which to collect data. Future research could be cognizant of the lengthy recruitment period and take it into account in the planning stages. It is highly probable that a longer recruitment period would boost our sample sizes.

Additionally, the sample was also skewed for externalizing problems, SES and gender that may limit the generalizability of results (Kukull & Ganguli, 2012). Sample characteristics revealed that our sample consisted largely of mothers from high SES backgrounds. Notably, most parents reported low levels of externalizing problems in their child, most of which lay within the boundaries of the 'normal' range (Goodman et al., 1997). Parents were recruited through sports clubs, tuitions centres, PACTS workshops, and Facebook groups, all of which may reflect a higher level of involvement and are associated with lower levels of externalizing problems and higher SES (Hill et al., 2004). The act of completing a survey could also be assumed to reflect a high level of parental involvement that limits the ability to tap into certain populations. Research into survey responding has uncovered certain samples of the population that may be more agreeable to the notion of completing a survey (Smith, 2008). In particular, studies have suggested that mothers and individuals from high SES background are more likely to complete a survey (Smith, 2008). While our method of recruitment was designed to ensure convenience and ease of accessibility to parents through administering a survey online, it may not be the most robust method of recruitment.

Before the survey closed, there was a consensus to approach neighbourhoods in the region in an attempt to increase representation and sample size. However, the

process of applying for ethical approval was too lengthy, and the study timeframe did not allow for a face-to-face method of data collection. Future research could attempt this method of recruitment and administer the survey in person as this would give researchers more influence in dictating representation of the sample. As online surveys have been implicated in lower response rates, utilizing traditional methods of recruiting participants could also result in larger sample sizes that could improve detection of effect sizes (Smith, 2008).

Despite the limitations, sampling restraints in this study was able to be overcome using sophisticated statistical software that resulted in robust analysis. Another strength of our research pertained to methodological recruitment. Despite the short timeframe allocated for data collection, this study was able to successfully collect responses from 142 participants, which could lead to the confident inference that, given a longer timeframe, this study would be able to reach out to more participants. The methodological procedure was also successful in obtaining a relatively large majority of mothers from high SES backgrounds, which could aid in confident generalizations in those areas. Our sample was further ethnically diversified, which helps improve the validity of the study.

Another strength of this study is that it provides a unique insight into parents' perspective of students' educational future. Set against a backdrop of increasing emphasis being placed on aspirations in university attendance, this study is pivotal in attempting to investigate the nature of parental aspirations as they are affected by their own perception of their child's behaviour. Understandably, students' aspirations have been thoroughly investigated in relation to university attendance. Nonetheless, given the importance of parents as shapers and influencers of aspirations, the limited literature investigating parental aspirations is surprising

(Reed, 2012). When combined with literature informing students' aspirations, approaching aspirations from the parents' perspective gives a more informed and accurate picture of the relationship between parents' and students' aspirations, and their relation to university.

Implications and Conclusions

Research implications. Aspirations are complex constructs. Undoubtedly, this study has contributed to the growing pool of research attempting to deconstruct parental aspirations and the mechanisms behind its operation. While the findings in this study may be limited by the constraints of this study, the results are still important in its implications.

Our results did not find support for the effects of externalizing problems on parental aspirations. While this could imply that externalizing problems do not impact upon parental behaviours, it could also suggest that parental aspirations generally remain invariant despite the presence of externalizing problems. While the two may seem complimentary, the notion that parental aspiration are invariant supports Appadurai's postulations and emphasizes the fact that aspirations are best-case scenarios that are not necessarily grounded in reality (Bok, 2010). This does not mean that parents' aspirations are unimportant. On the contrary, extensive research into the study of aspirations has emphasized time and time again its influence in shaping behaviour (Rutherford, 2015). Conversely, the idea that externalizing problems may not influence parents' behaviour, and thus their aspirations may implicate other factors that have heavier impacts on parental aspirations. Future research should aim to further conceptualise the concepts of externalizing problems and parental aspirations in a more in-depth manner, in order to investigate the two ideas presented above.

Another important implication of this study was the emergence of resources as a potential mediator of parental aspirations from differing SES backgrounds and externalizing problems. Results in both low and high SES samples suggests that resources are an important factor in determining their behaviour and aspirations and further emphasizes the disparity between differing levels of SES. The lack of knowledge seems to be most prominent within low SES samples as evidenced by their increasing levels of aspirations in the face of increasing externalizing problems. In contrast, high SES parents may put more weight on their financial capability to provide (Luthar & Ansary, 2005). Their relatively invariant aspirations may reflect confidence in not only the resources that they have access to, but other means that financial capability affords. For example, Luthar & Ansary suggests that children of affluent parents may affect the amount of effort teachers put into ensuring that the behavioural problems exhibited are reduced (2005). Studies suggests that teachers view externalizing problems in high and low SES differently (Luthar & Ansary, 2005). Whereas efforts will be concentrated in order to ensure that affluent students do not stray too far from academic conformity, no such effort is made for children from low SES populations (Luthar & Ansary, 2005). Teachers' negative perceptions of students' could contribute to a self-fulfilling prophecy that exacerbates externalizing problems across developmental trajectories (Hughes, Gleason, Zhang, 2005).

However, as mentioned previously, the limited scope and sample size of this study does not allow for definitive conclusions to be made. In order to explore this idea even further, future research should attempt to determine specific resources that contribute to increases and decreases of parental aspirations. More specifically, research should be conducted on the importance of knowledge and finances as

separate but independent, potential predictors of parental aspirations. Additionally, researchers should also investigate the role that teachers play in influencing the behavioural problems of students.

Additionally, this study further gives weight to other factors to be considered as a potential predictor of parental aspirations in future research, such as job satisfaction, parents' previous educational experiences, and parents' gender. However, future research should endeavour to expand our understandings of the association between adolescents with externalizing problems and university attendance. Given the high rates of prevalence within low SES population, it is essential that research explores possible mechanisms that could contribute to their low achievement in academic domain and develop interventions that could improve their participation in universities.

Theoretical and practical implications. While our results did not find support for the effect of externalizing problems on parental aspirations, this study still contributed to the literature on aspirations and higher education by providing support for Appadurai's theory of navigational capacity. To explain the association between aspirations and university education requires an understanding of expanded possibilities for the future and the unequal distribution of capacities (Prodonovich et al., 2014).

Our study lends support to the suggestion that parental aspirations remain invariant. Benefits of university attainment are heavily ingrained into dominant conceptualisations of aspirations, and individuals with access to societal norms would have embedded these ideas into their own aspirations (Prodonovich et al., 2014; Bok, 2010). It is also clear that parents of differing levels of SES have different levels of aspirations. Their capacity is different, and so are their aspirations

(Sellar et al., 2011). The understanding that resources are a substantial factor in determining parental aspirations for their children's educational attainment could lead instead to focus on interventions that teach them how to realize these aspirations. These could prompt workshops and interventions to veer away from the idea that certain population lack aspirations, and instead focus on how to channel these aspirations into realities. Workshops could act as decoders of *cold* knowledge that target specific university entrance requirements or financial aid application that could help bolster their knowledge of how to help their child achieve a university degree. The delivery of clearer information would be beneficial to parents who may not have had any experience with university and require external help in order to understand the processes involved.

The study also emphasizes the practical importance of maintaining current workshops, such as PACTS, that help lay the foundation for building effective social networks and delivering knowledge to parents that may prove invaluable. The PACTS workshop provides necessary information for parents who are interested in helping their child achieve occupational success and could extend their utility by emphasizing the association between parents' aspirations for their children and the increased likelihood of success. Additionally, it should also be an aim of PACTS workshops to communicate the fact that aspirations do not occur in isolation and are in fact embedded within a larger social context (Appadurai, 2004). Having a base of parents with an interest in their child's future occupational career provides an excellent foundation for the creation of social support networks. This could help parents build relationships with other parents with similar aspirations, as well as foster strong connections that could improve their child's opportunities of attending university.

This research has emphasized the importance of parents' perceptions of their child's educational pathways. Their imagined realities are integral in shaping and contributing towards their own children's realities and are largely moulded by resources in their immediate environment. Regardless of whether externalizing problems are present or absent, or the proximal influences that may impinge on their beliefs, parental aspirations have a huge role to play in instilling confidence in their child that, in turn, helps them succeed in their endeavours. Conveying their importance would go a long way in promoting appropriate ways on how to encourage and support their child's educational aspirations, which, with the right tools, can turn into a reality.

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