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Selective Education in Guyana: Comparing the Psychosocial Well-Being of Students Across Schools

Charlotte Shaw, Janelle Levesque, and Katrina McKie

Selective education research has demonstrated that students are aware of the low status of being allocated to a low-ability school. Recent data in Guyana has shown that low-ability school attendance is associated with low rates of student attendance, retention, and graduation. This study aims to understand the effects of ability grouping on students by comparing the psychosocial well-being of students from different ability schools. Data was collected from a sample of 193 adolescents (70 males and 123 females) aged 13-18 from four secondary schools; representing the four school ability rankings. It was hypothesised that student psychosocial well-being would be significantly lower in low-ability schools compared to high-ability schools. Unexpectedly, the results indicated that the highest ability school had significantly lower psychosocial well-being than the other lower ability schools. The results may be potentially explained by the theory of Big-Fish-Little-Pond Effect, however confirmation in future research is warranted.

Keywords: selective education, psychosocial well-being, Guyana, Big-Fish-Little-Pond Effect, ability grouping

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Introduction

The structure of educational systems varies worldwide with regards to ability grouping, which is the process of stratifying students based on academic ability (Buchmann & Dalton, 2002). Comprehensive education systems, such as those in Australia, Canada, and New Zealand, value equality of educational opportunity, and students are not stratified until after 16-years of age (OECD, 2013a). Conversely, selective education systems, such as those in Germany, Hong Kong, and Guyana, allocate students to different schools, classes or curriculums depending on their academic ability or preference (Buchmann & Park, 2009). In such education systems, students experience stratification as early as 10-years of age (OECD, 2013a). There is evidence that ability grouping contributes to inequality of student educational and occupational outcomes (OECD, 2013b).

The impact of school extends beyond the academic domain (Haynes, 2006), thus research exploring educational inequality has investigated the effects of ability grouping on psychosocial well-being (Ahmavaara & Houston, 2007; Müller & Hofmann, 2016; Van Houtte & Stevens, 2009). To date, most research in this area has been conducted in developed countries, with scant attention paid to psychosocial well-being within selective educational systems in developing countries. Between-school tracking was introduced to Guyana over 50 years ago and recent Guyanese data has shown that low-ability school enrolment is associated with low rates of student attendance, retention, and graduation (Ministry of Education Guyana [MoEG], 2013). This pilot study aims to understand the effects of ability grouping on students by comparing the psychosocial well-being of students from different ability schools, using measures of student engagement, future expectation, and self-esteem. Understanding the impact of ability grouping is important for furthering the goal of educational equality, as held by the MoEG.

Selective Education and Psychosocial Well-Being

Selective education systems are underpinned by a belief that teachers can best tailor instructional methods when they have students of homogenous academic ability to teach, rather than the diversity present within a mixed-ability class (Gamoran et al., 1995; Oakes, 1987). However, selective education systems are associated with educational inequality between low-ability and high-ability groups (Buchmann & Dalton, 2002; OECD, 2013a). For example, studies have found that students in high-abiliy schools achieved higher academic scores than those placed in low-ability schools, independent of their prior academic level (Guill et al., 2017; Jackson, 2009; Schagen & Schagen, 2002). These findings have been attributed to instructional differences, peer influences, and institutional status effects (Pallas et al., 1994). This educational outcome disparity suggests that ability grouping impacts the student, but the underlying cognitive process that underpins this impact is unclear.

To further understand the effect of ability grouping on students, researchers have examined the association between ability grouping and psychosocial well-being variables, including self-esteem (Ireson et al., 2001; Siu & Wu, 2012; Suk Wai Wong & Watkins, 2001), emotional adjustment (Müller & Hofmann, 2016), academic self-concept (Trautwein et al., 2006), future orientation (Ahmavaara & Houston, 2007), depression (Lipps et al., 2010) and study involvement (Van Houtte & Stevens, 2009). The literature is equivocal with results including nil, negative, and positive associations between low-ability grouping and psychosocial well-being. There is some evidence to suggest that the relationship between psychosocial well-being and ability grouping is influenced by the structure of the selective education system and the cultural context (Cheung & Rudowicz, 2003; OECD, 2013b; Pallas et al., 1994; Reuman, 1989).

Selective education research investigating psychosocial well-being has covered numerous selective education structures including between–school differentiation (vocational vs academic),

within school streaming (high-ability and low-ability classes/curriculum within a school) and between school tracking (high-ability and low-ability schools). Between-school tracking, as found in Guyana and the wider Anglophone Caribbean, is the most explicit and rigid form of ability grouping, and demonstrates the largest disparity of academic achievement and aspiration in comparison to other selective education systems (Brunello & Checchi, 2007; Buchmann & Dalton, 2002; Buchmann & Park, 2009; Chmielewski et al., 2013; Dupriez & Dumay, 2006; Dupriez et al., 2012). Between-school tracking is an overt indication of student academic ability, which is public to peers, friends, and family (Lipps et al., 2010; Trautwein et al., 2006), with students aware of the inferior status of low-ability grouping (Abraham, 2008; Hallam & Ireson, 2007). Thus, explicit tracking is a public symbol of ability, which may amplify the shame associated with being allocated to a low-ability school. It is due to this explicit between-school structure that "the Caribbean educational system provides an ideal opportunity to examine the relationship between academic tracking and students' emotional health" (Lipps et al., 2010, p. 1). This study is the first (to the authors' knowledge) to investigate the psychosocial effects of ability grouping within the Guyanese context.

Student Engagement

Student engagement is defined as student participation within a school that fosters a sense of commitment and belonging (Christenson et al., 2001). Differentiation-polarisation theory posits that students disconnect from school and develop an anti-school attitude in order to overcome the status deprivation associated with low-ability grouping (Hargreaves, 1967). It could be restated that students reject school after school rejects them. In Belgium, Van Houtte and Stevens (2009) found study involvement (enthusiasm and interest in study) to be significantly lower in vocational (i.e. lower ability) school students than academic (i.e. higher ability) school students. In the Anglophone Caribbean region, family cohesion (Stubbs & Maynard, 2016); gender (Fayombo, 2010); socioeconomic status (Crichlow, 2009); and parental involvement

(Marshall & Jackman, 2015) have all been reported as significant predictors of student engagement. However, the selective education system has not previously been considered. As such, little is known of the relationship between student engagement and ability grouping in the region.

Future Expectation

Future expectation can be defined as an individual's beliefs of the future with regards to major life outcomes, such as relationships, career, and education (Israelashvili, 1997). The way an adolescent envisages their future is important as it can influence their current behavior (e.g. decision making, risk taking) and subsequently impact on future education, employment, and socioemotional functioning (Wyman et al., 2009). Multiple studies have shown that students who complete schooling in high-ability contexts have higher educational and occupational aspirations than their low-ability peers (Ahmavaara & Houston, 2007; Buchmann & Dalton, 2002; Ireson et al., 2001; Karlson, 2015; MacKenzie, 1989; Malmberg & Trempała, 1997; Nagengast & Marsh, 2012; Vanfossen et al., 1987). This is the first study to explore the relationship between ability grouping and student future expectation in a Guyanese context.

Self-Esteem

Self-esteem is the global perception of the self as a person (Baumeister et al., 2003; Rosenberg, 1965b). It is thought that academic results are a large contributor to adolescent self-esteem as "school marks are a particularly public, visible, overt indicator of an important aspect of a pupil's worth" (Rosenberg et al., 1989, p. 1007). Thus, it is argued that allocation to a low-ability school may adversely impact self-esteem, as the student receives institutional feedback that they are not as able as their peers (Gamoran & Berends, 1987; Oakes, 1987). The directionality of this relationship indicates that academic performance influences self-esteem, but

self-esteem does not predict academic performance (Baumeister et al., 2003). Accordingly, low-ability grouping is associated with significantly lower self-esteem than high-ability grouping, even after controlling for academic achievement (Ireson et al., 2001; Malmberg & Trempała, 1997; Van Houtte et al., 2012). Thus, there is theoretical and empirical support for a negative impact of low-ability grouping on self-esteem.

Education in Guyana

The United Kingdom (UK) introduced the selective system of student assessment to many developing nations within the British Empire during the 1950s and 1960s. All eleven-year-old children in Guyana completed an exam at the end of primary school (primary school education is non-selective), the results of which determined their secondary school allocation (MacKenzie, 1989). This system was known in the UK as the "Eleven Plus", however it was renamed across the Anglophone Caribbean as the "Common Entrance Exam" (CEE). The exam was instituted in many Anglophone Caribbean countries, including Guyana, as a way to allocate limited secondary places to the surplus of primary school aspirants (MacKenzie, 1989).

While Guyana achieved independence from Britain in 1966 and no longer has limited secondary school places, the British selective education system remains (MoEG, 2013). The CEE has been refined and is now referred to as the National Grade Six Assessment (NGSA) (Howse, 2008). The NGSA is completed by all grade six primary school students over two days to assess mathematics, English language, social studies, and science (MoEG, 2013). The NGSA results are then used to determine allocation into public secondary schools (MoEG, 2009). Schools are ranked as A (highest), B, C or D (lowest) according to historical standardised academic outcomes, and these rankings are re-assessed every five years. There also exists a private school industry in Guyana, which is not examined in this study.

The MoEG recognizes the inherent equality issues with between-school tracking. Specifically, the MoEG has noted institutional disadvantage at the lower ability schools, including higher levels of teacher absenteeism, a higher proportion of untrained teachers, and poorer facilities (MoEG, 2013). It is acknowledged that between-school tracking may be contributing to low secondary school retention, attendance and graduation at the lower ability schools (Howse, 2008; MoEG, 2013). This pilot study aims to investigate whether institutional inequality between schools extends to psychosocial well-being, specifically student engagement, future expectation, and self-esteem.

The Present Study

The aim of this pilot study is to compare the psychosocial well-being of public secondary school students enrolled at A, B, C, and D schools within the selective education system in Guyana. Psychosocial well-being is captured using the variables of future expectation, student engagement, and self-esteem. It was hypothesised that student psychosocial well-being would be significantly lower in lower-ability schools compared to higher-ability schools.

Method

Participants and Procedure

Four public secondary schools located in the capital city of Georgetown (Region 4) were nominated by the MoEG, representing A, B, C, and D classifications respectively. Participants were 193 students aged 13-18 years (M^{age} = 14.37, SD^{age} = 0.63) enrolled in Form 3. Third year secondary school students were recruited as they had been at the school for over two years and were well acquainted with the school culture and climate (Delcourt et al., 1997; Suk Wai Wong & Watkins, 2001). The sample was composed

of 193 students (A = 62, B = 31, C = 69, D = 31). The sample consisted of 36.3% male (n = 70) and 63.7% female (n = 123), which reflected the gender imbalance that is typical of the Anglophone Caribbean secondary school population (Kutnick, 2000). The sample was diverse in regard to ethnicity (52.3% mixed, 24.4% African, 18.1% Indian, 1.6% Amerindian, 0.5% Portuguese, 0.5% Chinese, and 2.6% other) and representative of the Guyanese population's ethnic composition (Bureau of Statistics Guyana, 2016).

Recruitment was conducted in every Form 3 class at each school in person by the researcher. The study was briefly introduced, and explanatory statements and consent forms distributed to students during class time to take home for parental consideration. Written parental consent and written student assent was required before student participation was confirmed. The questionnaire was completed during class time. Ethical approval was obtained from the Monash University Human Research Ethics Committee and permission was granted by the MoEG.

Measures

Demographics. Items relating to age, gender, ethnicity, academic achievement, socioeconomic status, maternal education level, paternal education level, and absenteeism were included in the demographic section of the survey. These demographic variables were selected for inclusion as they have all been related to student psychosocial well-being in previous research (Chen & Paterson, 2006; Kerpelman et al., 2008; Kutnick, 2000). Academic achievement was measured using self-reported grades; with four items asking students to describe their general academic achievement and their comparative standing relative to other students in their class, e.g., "In the past 12 months, the grades I mostly received were A/B/C/D/<D" (De Castella & Byrne, 2015). Higher grades were coded as higher scores and the four items were averaged to create an academic achievement score. Although self-report measures of this kind are subject to memory distortion or bias, research indicates that the extent of these biases

is typically small (Cassady, 2001). Subjective socioeconomic status was measured using one item from the MacArthur Scale of Subjective Social Status–Youth Version (SSS-Y) (Goodman et al., 2001). Students were asked to place their family on a visual ten rung ladder representing Guyanese society, with higher rungs indicating higher social status (Goodman et al., 2001). Questions pertaining to mother's and father's highest level of education were also included, with answers ranging from "Primary School" through to "Post-Graduate University". Absenteeism was measured with one item asking how many days the student had been absent in the last month.

Future Expectations. The Future Expectations Scale for Adolescents (FESA) (McWhirter & McWhirter, 2008) is a 25-item scale which utilises a 5-point Likert scale (e.g., 1 = *Definitely Won't, 5 = Definitely Will*). The FESA includes items relating to education, career, marriage and children, health, leadership, and cultural participation. These sociocultural items facilitate a holisitic representation of an adolescents' perceived future in a developing country context (McCabe & Barnett, 2000; McWhirter & McWhirter, 2008). All items begin with, "When I am an adult…" and sample items include, "I will accomplish what I want to do with my life," and "I will have a healthy diet". Two items relating to church activities were modified to reflect the diversity of religious beliefs in Guyana. Items were added together to create a final score, with higher scores indicating more positive future expectations. Internal consistency of .87 and construct validity of all five factors have previously been confirmed (McWhirter & McWhirter, 2008). The present sample demonstrated good internal reliability, $\alpha = .91$.

Student Engagement. The 35-item Student Engagement Instrument (SEI; Appleton et al., 2006) utilizes a 4-point Likert scale (e.g. 1 = *Strongly Disagree, 4 = Strongly Agree*). Example items include "my teachers are there for me when I need them", and "students here respect what I have to say". The item relating to ongoing education was changed to reflect the Guyanese

context. Higher scores reflected higher student engagement. The SEI has demonstrated acceptable internal reliability, ranging from .73 to .90, in a Caribbean sample (Stubbs & Maynard, 2016) and has good construct validity (Appleton et al., 2006). The present sample produced a satisfactory level of internal consistency with a Cronbach's alpha of .85.

Self-Esteem. Global self-esteem was measured using the 10-item Rosenberg Self Esteem Scale (Rosenberg, 1965a) which utilises a 4-point Likert scale (e.g., 1 = *Strongly Disagree, 4 = Strongly Agree*). Example items include, "on the whole, I am satisfied with myself" and "I feel I do not have much to be proud of". Items seven and nine were slightly modified to reflect the level of literacy in Guyana. Five items were reverse scored and overall higher scores indicated higher self-esteem. Internal consistency and convergent validity of the RSES have been demonstrated in recent research, including developing countries such as Bangladesh (α = .79) and Zimbabwe (α = .75) (Schmitt & Allik, 2005). Within this sample the internal consistency for the scale was α = .82.

Results

Demographic differences between the four schools were investigated in order to consider possible extraneous effects on the data, and no statistically appropriate covariates were identified from the demographics measured. Mean scores for each psychosocial well-being variable were calculated, revealing that School A scored consistently lower than the other three schools, as seen in Table 1.

Table 1

Descriptive Data

Psychosocial Well-being	School	M	SD	SE	95% Confidence Interval for Mean	
					Lower	Upper
Student Engagement	A	72.32	12.05	1.53	69.26	75.38
	B	79.87	8.78	1.58	76.65	83.09
	C	78.62	9.60	1.56	76.32	80.93
	D	79.65	8.92	1.60	76.37	82.92
Self-esteem	A	16.21	6.70	.85	14.51	17.91
	B	19.87	4.88	.88	18.08	21.66
	C	19.10	4.12	.50	18.11	20.09
	D	20.58	4.53	.81	18.92	22.24
Future Expectation	A	78.55	14.19	1.80	74.95	82.15
	B	85.90	9.30	1.67	82.49	89.32
	C	85.35	11.46	1.38	82.60	88.10
	D	86.16	10.63	1.91	82.26	90.06

A one-way between groups MANOVA was conducted, investigating differences between schools (A, B, C, D) for three dependent variables (student engagement, future expectation, self-esteem). There was a significant effect of school on student psychosocial well-being; $V = .14$, $F(9, 567) = 3.02$, $p = .002$, $\eta p^2 = .046$. This reflects a significant small effect of school on student psychosocial well-being (Pallant, 2007). The multivariate effect size implies that 4.6% of the variance in psychosocial well-being was accounted for by school.

A post-hoc discriminant function analysis was conducted to identify the variables that discriminated between the schools. One significant discriminant function was calculated with a combined Wilks' lambda of $\Lambda = .86$, $\chi^2 (9, N = 193) = 27.64$, $p < .001$. The function accounted for 96.6% of the between-group variability and 13% of the total relationship between psychosocial well-

being and school. The correlation coefficients of psychosocial well-being variables and the discriminant function revealed that self-esteem (r = .82), student engagement (r = .82) and future expectation (r = .72) all loaded highly onto the function. The function at group centroid values for each school were School A = -.55, School B = .32, School C = .18 and School D = .38, clearly showing that the function discriminated between School A and the other three schools.

Discussion

This pilot study aimed to explore the impact of ability grouping on student psychosocial well-being in Guyana by comparing the self-esteem, future expectation, and student engagement of students from A, B, C, and D schools. Based on previous research, it was hypothesised that students attending low-ability schools would have lower psychosocial well-being than those attending high-ability schools. Contrary to expectations, the hypothesis was not supported, and it was found that School A had significantly lower psychosocial well-being than schools B, C, and D, with no significant difference observed between Schools B, C, and D. The discriminant analysis showed that all three psychosocial well-being variables contributed approximately equally to this effect. Thus, the students from the highest ability school reported the lowest levels of student engagement, future expectation, and self-esteem.

Selective Education and Psychosocial Well-being

In relation to school engagement, differentiation-polarisation theory proposes that students allocated to low-ability schools disconnect from school and become demotivated towards school work (Hargreaves, 1967). Past research provided support for the hypothesis that students from low-ability schools have lower student engagement than students attending high-ability schools (Van Houtte & Stevens, 2009; Vanfossen et al., 1987). However,

in this Guyanese sample, student engagement was found to be lowest in the highest ability school.

Whilst studies examining ability grouping and student engagement are limited, there is prior evidence of similar results using other measures closely related to student engagement. In Taiwan, a significant negative relationship was reported between school-average ability and "school adjustment", defined as relationships with peers and teachers (Sung et al., 2014). Furthermore, Steinhoff and Buchmann's (2017) longitudinal study of school engagement in Switzerland found that high-ability school placement predicted a decrease in academic interest. Both Sung et al. (2014) and Steinhoff and Buchmann (2017) attributed their findings to the pressure of increased academic challenges and peer comparison effects. It is possible that these same peer comparison processes have impacted on the student engagement of students at School A in Guyana.

Future expectation was lowest in School A, revealing another unanticipated result. The breadth of past evidence has demonstrated that students from low-ability contexts have lower educational and occupational aspirations than their high-ability peers (Ahmavaara & Houston, 2007; Buchmann & Dalton, 2002; Ireson et al., 2001; Karlson, 2015; MacKenzie, 1989; Malmberg & Trempała, 1997; Nagengast & Marsh, 2012; Vanfossen et al., 1987). However, there is empirical precedence of high-ability students having lower educational and occupational aspirations than low-ability students. Marsh and O'Mara (2010) found that school-average ability negatively correlated with occupational and educational aspiration, when controlling for individual levels of academic ability and socioeconomic status. Similar to the researchers investigating school engagement, Marsh and O'Mara (2010) attributed this result to peer comparison effects, by positing that high-ability students perceived their abilities as relatively average amongst their high-ability peers, and subsequently adjusted their future ambitions.

Based on previous research, it was anticipated that low-ability school allocation would lead to reduced self-esteem in students

(Ireson et al., 2001; Malmberg & Trempała, 1997; Trautwein et al., 2006; Van Houtte et al., 2012). Thus, the current finding that the students from School A had the lowest self-esteem was surprising. However, there is empirical precedence of high-ability school students reporting lower self-esteem than low-ability school students. In Hong Kong, Suk Wai Wong and Watkins (2001) found that students from high-ability classes had significantly lower self-esteem than low-ability class students. Similar to the research into student engagement and future aspirations, this result was attributed to peer comparison processes, positing that the self-esteem of high-ability students decreased after self-comparison with high-ability peers. Consequently, it is suggested that peer comparison, and specifically grouping high-ability students together, may have a detrimental effect on their psychosocial well-being.

Big-Fish-Little-Pond Effect

Social comparison theory, which purports that people assess themselves in comparison to others (i.e., the frame-of-reference effect) (Festinger, 1954) may explain the unexpected association between lower psychosocial well-being and School A. For example, a student who compares themselves to a higher ability student may have a more negative self-concept than another of equal ability who compares themselves to a lower ability student. A frame-of-reference effect model has been applied to selective education systems by Marsh and Parker (1984), using the reference point of school-average ability. They discovered that when a "big fish" (high-ability student) enters a "big pond" (school with high average ability) their academic self-concept decreases. Marsh (1987) claimed that a big fish would have a more stable and positive academic self-concept in a "little pond" (school with mixed-ability), hence the name Big-Fish-Little-Pond Effect (BFLPE). The BFLPE has since been supported by longitudinal (Marsh et al., 1995) and experimental research (Zell & Alicke, 2009). In the current study, the students at School A had all previously attended mixed-ability primary schools before commencing studies at the high-ability

secondary school two years previously. The experience of being in the high-ability environment may have negatively impacted on their self-esteem, future expectation, and student engagement.

Past research of the BFLPE has largely concentrated on both overall and domain specific academic self-concepts (e.g. Mathematics self-concept). However, there is evidence to suggest that the BFLPE also occurs with psychosocial variables such as anxiety (Zeidner & Schleyer, 1999), educational aspirations (Marsh, 1991; Marsh & O'Mara, 2010), school adjustment (Sung et al., 2014), school engagement (Steinhoff & Buchmann, 2017), self-esteem (Suk Wai Wong & Watkins, 2001), and career aspirations (Nagengast & Marsh, 2012). Thus, it is plausible that the BFLPE is responsible for the lower outcomes of School A students on self-esteem, future expectation, and student engagement.

A BFLPE has not previously been identified in a Guyanese sample. However, the BFLPE has been cross-culturally validated in 41 countries (both developing and developed) as well as collectivist and individualist cultures (Marsh & Hau, 2003; Seaton et al., 2009). Furthermore, there is some evidence to suggest a BFLPE in Jamaica. Delcourt et al. (1997) found that significantly less high ability school students were satisfied with their academic performance than low ability school students. BFLPE may indeed be a likely occurrence in Guyana due to the explicit selective education system that stratifies students at a young age, as these two factors are moderators of the BFLPE (Nagengast & Marsh, 2011; Salchegger, 2016). These features of Guyana's between-school tracking education system are shared throughout the Anglophone Caribbean. Thus, the contextual features of Guyana's selective education system, and the Anglophone Caribbean, are fitting for a BFLPE.

Limitations and Future Research

There are limitations to this study that require acknowledgement. The first is the quasi-experimental research design, which used a cross-sectional sample of selective schools.

An inherent component of this design is a "selection effect", as the non-random nature of a selective education system means that student academic ability varies across schools (Astin & Lee, 2003). The selection effect can also extend to variables such as school resources, teacher qualifications, and parental support (Chmielewski et al., 2013). Whilst key individual demographic measures were found to be not statistically significant, school-level contextual variances were not measured. However, the selection effect typically favours the top performing schools (Marsh, 1991); thus, in the case of the unexpected results, this is not of major concern for this study. Furthermore, the fact that the results were significant in the reverse, without needing to control for pre-existing differences (including academic grades), speaks to the robustness of the finding (Marsh, 1991).

Whilst the sample was large enough to have statistical power, the modest size of this pilot study meant that data collection was limited to one school per classification (A, B, C, D) located in Georgetown and one grade level within each school. It is possible that there was a unique effect of this A school, or the grade surveyed within that school, and that the sample is not representative of the A classification. For example, the school could have an ultra-competitive culture, a factor thought to correlate with a BFLPE (Salchegger, 2016). Replicating this study with a larger number of schools from each classification, and other regions of Guyana, would be the first step for future research and required to verify the BFLPE in Guyana.

The non-significant difference in psychosocial well-being of schools B, C, and D was unexpected and warrants further investigation. The MoEG has reported inequitable outcomes with regards to retention, attendance, and academic outcome deficiencies at lower ability schools (MoEG, 2013). The present study sought to explore potential underlying psychosocial variables that may explain the outcome disparities between schools. However, the results suggest that low-ability school placement does not negatively impact student psychosocial well-being in Guyana. Thus, further research is needed to understand the schooling experience of low-ability students and the factors that are contributing to the inequalities identified by the MoEG.

Significance and Implications

A key strength of this study is that it examines the psychosocial impacts of the selective education system in Guyana, a structure neglected from analysis since institution over 50 years ago. The results suggest a possible BFLPE on psychosocial well-being in the top rank of the Guyanese selective education system. This is significant, as research has shown that students impacted by the BFLPE have lower occupational aspirations, educational aspirations, and grade point averages than their equivalent counterparts at non-selective schools (Marsh, 1991; Marsh & O'Mara, 2010). Thus, grouping high ability students together may lead to students not reaching their full potential, and research has shown that these effects can extend for at least five years beyond graduation (Marsh & O'Mara, 2010). Therefore, the selective education system may not be in the best interest of the highest ability children. This view contradicts the main argument against abolishing the selective education system, which is that abolition will disadvantage high-ability students (MacKenzie, 1989). This paradoxical finding has implications for parents, teachers, and the MoEG, who seek to create an education system that serves all equally.

It has long been argued across the Anglophone Caribbean that the selective education system needs reform, even complete abolishment, to become more inclusive and equitable (De Lisle et al., 2012; Lipps et al., 2010; MacKenzie, 1989; Payne & Barker, 1986; Pilgrim et al., 2018). Past research has focused on the negative impacts for the students allocated to the low ability schools and the social inequality that the system perpetuates. This study contributes to this wider body of reform advocacy research by demonstrating that there are also negative impacts for the students allocated to high ability schools. Furthermore, this research provides more empirical data for consideration by those writing education policy, as recommended by De Lisle (2015).

In lieu of immediate reform, the potential for ability grouping to negatively impact the psychosocial well-being of the top

students has practical implications for pedagogical practice at high-ability schools in Guyana and the Anglophone Caribbean. Shifting away from a competitive culture to one of cooperation is a suggested strategy for counteracting the BFLPE in high-ability schools (Marsh, 1991). Furthermore, the promotion of individual progress and personalised learning has been proposed as a way to subvert peer comparison (Salchegger, 2016). However, there is currently limited empirical evidence that any interventions significantly reduce the BFLPE and there is a need for future research in this area (Lüdtke et al., 2005; Roy et al., 2015).

Conclusion

This pilot study suggests a possible BFLPE on psychosocial well-being for high-ability school students in Guyana. Future research using a larger sample from an increased number of schools is required in order to confirm the BFLPE. This finding is theoretically significant because the BFLPE has not previously been identified in Guyana and has had only limited application to psychosocial well-being measures in the international literature thus far. This finding challenges the common assumption in Guyana that the selective education system benefits high-ability students. Promoting cooperation over competition at the school level may help to alleviate the pressures potentially experienced by high-ability students.

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References

Abraham, J. (2008). Pupils' perceptions of setting and beyond—A response to Hallam and Ireson. *British Educational Research Journal, 34*(6), 855-863. https://doi.org/10.1080/01411920802044511

Ahmavaara, A., & Houston, D. M. (2007). The effects of selective schooling and self-concept on adolescents' academic aspiration: An examination of Dweck's self-theory. *British Journal of Educational Psychology, 77*(3), 613-632. https://doi.org/10.1348/000709906x120132

Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring cognitive and psychological engagement: Validation of the Student Engagement Instrument. *Journal of School Psychology, 44*(5), 427-445. https://doi.org/10.1016/j.jsp.2006.04.002

Astin, A. W., & Lee, J. J. (2003). How risky are one-shot cross-sectional assessments of undergraduate students? *Research in Higher Education, 44*(6), 657-672. https://doi.org/10.1023/a:1026175525173

Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest, 4*(1), 1-44. https://doi.org/10.1111/1529-1006.01431

Brunello, G., & Checchi, D. (2007). Does school tracking affect equality of opportunity? New international evidence. *Economic Policy, 22*(52), 782-861. https://doi.org/10.1111/j.1468-0327.2007.00189.x

Buchmann, C., & Dalton, B. (2002). Interpersonal influences and educational aspirations in 12 countries: The importance of institutional context. *Sociology of Education*, 99-122. https://doi.org/10.2307/3090287

Buchmann, C., & Park, H. (2009). Stratification and the formation of expectations in highly differentiated educational systems. *Research in Social Stratification and Mobility, 27*(4), 245-267. https://doi.org/10.1016/j.rssm.2009.10.003

Bureau of Statistics Guyana. *(2016). Compendium 2-Population composition*. www.statisticsguyana.gov.gy/download.php?file=93

Cassady, J. C. (2001). Self-reported GPA and SAT: A methodological note. *Practical Assessment, Research & Evaluation, 7*(12), 1-6. https://doi.org/10.21275/v5i3.nov161486

Chen, E., & Paterson, L. Q. (2006). Neighborhood, family, and subjective socioeconomic status: How do they relate to adolescent health? *Health Psychology, 25*(6), 704-714. https://doi.org/10.1037/0278-6133.25.6.704

Cheung, C.-K., & Rudowicz, E. (2003). Academic outcomes of ability grouping among junior high school students in Hong Kong. *The Journal of Educational Research, 96*(4), 241-254. https://doi.org/10.1080/00220670309598813

Chmielewski, A., Dumont, H., & Trautwein, U. (2013). Tracking effects depend on tracking type: An international comparison of students' mathematics self-concept. *American Educational Research Journal, 50*(5), 925-957. https://doi.org/10.3102/0002831213489843

Christenson, S. L., Sinclair, M. F., Lehr, C. A., & Godber, Y. (2001). Promoting successful school completion: Critical conceptual and methodological guidelines. *School Psychology Quarterly, 16*(4), 468. https://doi.org/10.1521/scpq.16.4.468.19898

Crichlow, J. (2009). *Student motivation and performance behaviours among Barbadian adolescents.* Unpublished doctoral dissertation, The University of the West Indies, Cave Hill, Barbados. http://hdl.handle.net/2139/4877

De Castella, K., & Byrne, D. (2015). My intelligence may be more malleable than yours: The revised implicit theories of intelligence (self-theory) scale is a better predictor of achievement, motivation, and student disengagement. *European Journal of Psychology of Education, 30*(3), 245-267. https://doi.org/10.1007/s10212-015-0244-y

De Lisle, J., Smith, P., Keller, C., & Jules, V. (2012). Differential outcomes in high-stakes eleven plus testing: The role of gender, geography, and assessment design in Trinidad and Tobago. *Assessment in Education: Principles, Policy & Practice, 19*(1), 45-64. https://doi.org/10.1080/096959 4x.2011.568934

De Lisle, J. (2015). Evolving data use policy in Trinidad and Tobago: The search for actionable knowledge on educational improvement in a small island developing state. *Educational Assessment, Evaluation and Accountability, 28*. https://doi.org/10.1007/s11092-015-9232-7.

Delcourt, M. A., Lyn, H. D., & Rejskind, F. G. (1997). Self-perceptions of low-and high-ability adolescents in a Caribbean context. *Journal for the Education of the Gifted, 20*(3), 224-252.

Dupriez, V., & Dumay, X. (2006). Inequalities in school systems: Effect of school structure or of society structure? *Comparative Education, 42*(02), 243-260. https://doi.org/10.1080/03050060600628074

Dupriez, V., Monseur, C., Van Campenhoudt, M., & Lafontaine, D. (2012). Social inequalities of post-secondary educational aspirations: Influence of social background, school composition and institutional context. *European Educational Research Journal, 11*(4), 504-519. https://doi.org/10.2304/eerj.2012.11.4.504

Fayombo, G. A. (2010). Gender differences in study habit, interest in schooling and attitude toward substance abuse among secondary school adolescents in Barbados. *Caribbean Education Research Journal, 2*(1), 87-95. https://doi.org/10.5430/wje.v1n1p136

Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7*(2), 117-140. https://doi.org/10.1177/001872675400700202

Gamoran, A., & Berends, M. (1987). The effects of stratification in secondary schools: Synthesis of survey and ethnographic research. *Review of Educational Research, 57*(4), 415-435. https://doi.org/10.3102/00346543057004415

Gamoran, A., Nystrand, M., Berends, M., & LePore, P. C. (1995). An organizational analysis of the effects of ability grouping. *American Educational Research Journal, 32*(4), 687-715. https://doi.org/10.3102/00028312032004687

Guill, K., Ludtke, O., & Koller, O. (2017). Academic tracking is related to gains in students' intelligence over four years: Evidence from a propensity score matching study. *Learning and Instruction, 47*, 43-52. https://doi.org/10.1016/j.learninstruc.2016.10.001

Goodman, E., Adler, N. E., Kawachi, I., Frazier, A. L., Huang, B., & Colditz, G. A. (2001). Adolescents' perceptions of social status: Development and evaluation of a new indicator. *Pediatrics, 108*(2), e31-e31. https://doi.org/10.1542/peds.108.2.e31

Hallam, S., & Ireson, J. (2007). Secondary school pupils' satisfaction with their ability grouping placements. *British Educational Research Journal, 33*(1), 27-45. https://doi.org/10.1080/01411920601104342

Hargreaves, D. (1967). *Social relations in secondary school*. London: Routledge and Kegan Paul.

Haynes, C. (2006). The integrated student: Fostering holistic development to advance learning. *About Campus, 10*(6), 17-23. https://doi.org/10.1002/abc.150

Howse, G. (2008). *Universal Secondary Education (USE) in Guyana*. https://openknowledge.worldbank.org/bitstream handle/10986/12327/535160ESW0P0941eport0by0Geoff0 Howse.pdf?sequence=1&isAllowed=y:

Ireson, J., Hallam, S., & Plewis, I. (2001). Ability grouping in secondary schools: Effects on pupils' self-concepts. *British Journal of Educational Psychology, 71*(2), 315-326. https://doi.org/10.1348/000709901158541

Israelashvili, M. (1997). School adjustment, school membership and adolescents' future expectations. *Journal of Adolescence, 20*(5), 525-535. https://doi.org/10.1006/jado.1997.0107

Jackson, C. K. (2009). Ability-grouping and academic inequality: Evidence from rule-based student assignments (No. w14911). National Bureau of Economic Research.

Karlson, K. B. (2015). Expectations on track? High school tracking and adolescent educational expectations. *Social Forces, 94*(1), 115-141. https://doi.org/10.1093/sf/sov006

Kerpelman, J. L., Eryigit, S., & Stephens, C. J. (2008). African American adolescents' future education orientation: Associations with self-efficacy, ethnic identity, and perceived parental support. *Journal of Youth and Adolescence, 37*(8), 997-1008. https://doi.org/10.1007/s10964-007-9201-7

Kutnick, P. (2000). Girls, boys and school achievement: Critical comments on who achieves in schools and under what economic and social conditions achievement takes place—a Caribbean perspective. *International Journal of Educational Development, 20*(1), 65-84. https://doi.org/10.1016/S0738-0593(99)00045-0

Lipps, G. E., Lowe, G. A., Halliday, S., Morris-Patterson, A., Clarke, N., & Wilson, R. N. (2010). The association of academic tracking to depressive symptoms among adolescents in three Caribbean countries. *Child and Adolescent Psychiatry and Mental Health, 4*(1), 16. https://doi.org/10.1186/1753-2000-4-16

Lüdtke, O., Köller, O., Marsh, H. W., & Trautwein, U. (2005). Teacher frame of reference and the big-fish–little-pond effect. *Contemporary Educational Psychology, 30*(3), 263-285. https://doi.org/10.1016/j.cedpsych.2004.10.002

MacKenzie, C. G. (1989). The eleven-plus examination in developing countries: A case study. *Educational Studies, 15*(3), 281-300. https://doi.org/10.1080/0305569890150306

Malmberg, L.-E., & Trempała, J. (1997). Anticipated transition to adulthood: The effect of educational track, gender, and self-evaluation on Finnish and Polish adolescents' future orientation. *Journal of Youth and Adolescence, 26*(5), 517-537. https://doi.org/10.1080/00223989809599165

Marsh, H. W. (1987). The big-fish-little-pond effect on academic self-concept. *Journal of Educational Psychology, 79*(3), 280. https://doi.org/10.1037//0022-0663.79.3.280

Marsh, H. W. (1991). Failure of high-ability high schools to deliver academic benefits commensurate with their students' ability levels. *American Educational Research Journal, 28*(2), 445-480. https://doi.org/10.3102/00028312028002445

Marsh, H. W., Chessor, D., Craven, R., & Roche, L. (1995). The effects of gifted and talented programs on academic self-concept: The big fish strikes again. *American Educational Research Journal, 32*(2), 285-319. https://doi.org/10.2307/1163433

Marsh, H. W., & Hau, K.-T. (2003). Big-Fish--Little-Pond effect on academic self-concept: A cross-cultural (26-country) test of the negative effects of academically selective schools. *American Psychologist, 58*(5), 364-376. https://doi.org/10.1037/0003-066x.58.5.364

Marsh, H. W., & O'Mara, A. J. (2010). Long-term total negative effects of school-average ability on diverse educational outcomes. *Zeitschrift fur Padagogische Psychologie*. https://doi.org/10.1024/1010-0652.a000004

Marsh, H. W., & Parker, J. (1984). Determinants of student self-concept: Is it better to be a relatively large fish in a small pond even if you don't learn to swim as well? *Journal of Personality and Social Psychology, 47*(1), 213. https://doi.org/10.1037//0022-3514.47.1.213

Marshall, I. A., & Jackman, G.-A. (2015). Parental involvement, student active engagement and the 'secondary slump' phenomenon—Evidence from a three-year study in a Barbadian secondary school. *International Education Studies, 8*(7), 84. https://doi.org/10.5539/ies.v8n7p84

McCabe, K., & Barnett, D. (2000). First comes work, then comes marriage: Future orientation among African American young adolescents. *Family Relations, 49*(1), 63-70. https://doi.org/10.1111/j.1741-3729.2000.00063.x

McWhirter, E. H., & McWhirter, B. T. (2008). Adolescent future expectations of work, education, family, and community: Development of a new measure. *Youth & Society, 40*(2), 182-202. https://doi.org/10.1177/0044118X08314257

Ministry of Education Guyana. (2009). Criteria for the placement of pupils students. https://education.gov.gy/web2/index.php/more-documents/other-files/policy-documents/718-criteria-for-the-placement-of-pupils-students-in-nursery-primary-and-secondary-schools

Ministry of Education Guyana. (2013). Education strategic plan. https://education.gov.gy/web2/index.php/more-documents/other-files/policy-documents/730-education-strategic-plan/file

Müller, C. M., & Hofmann, V. (2016). Does being assigned to a low school track negatively affect psychological adjustment? A longitudinal study in the first year of secondary school. *School Effectiveness and School Improvement, 27*(2), 95-115. doi:https://doi.org/10.1080/09243453.2014.980277

Nagengast, B., & Marsh, H. W. (2011). The negative effect of school-average ability on science self-concept in the UK, the UK countries and the world: The Big-Fish-Little-Pond-Effect for PISA 2006. *Educational Psychology, 31*(5), 629-656. https://doi.org/10.1080/01443410.2011.586416

Nagengast, B., & Marsh, H. W. (2012). Big fish in little ponds aspire more: Mediation and cross-cultural generalizability of school-average ability effects on self-concept and career aspirations in science. *Journal of Educational Psychology, 104*(4), 1033. https://doi.org/10.1037/a0027697

Oakes, J. (1987). Tracking in secondary schools: A contextual perspective. *Educational Psychologist, 22*(2), 129-153. https://doi.org/10.1207/s15326985ep2202_3

OECD. (2013a). *PISA 2012 results: What makes schools successful?* Resources, policies and practices (volume IV): OECD, Paris, France. https://doi.org/10.1787/9789264201156-en

OECD. (2013b). *Results: Excellence through equity: Giving every student the chance to succeed (volume II):* OECD Publishing. https://doi.org/10.1787/9789264201132-6-en

Pallant, J. (2007). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows version 15*: Open University Press.

Pallas, A. M., Entwisle, D. R., Alexander, K. L., & Stluka, M. F. (1994). Ability-group effects: Instructional, social, or institutional? *Sociology of Education*, 27-46. https://doi.org/10.2307/2112748

Payne, M. A., & Barker, D. O. (1986). Still preparing children for the 11+: Perceptions of parental behaviour in the West Indies. *Educational Studies, 12*(3), 313-325. https://doi.org/10.1080/0305569860120307

Pilgrim, M., Hornby, G., & Inniss, T. (2018). Selective Secondary School Education In Barbados: The Need For Change. *Journal of International and Comparative Education (JICE)*, 111-126.

Reuman, D. A. (1989). How social comparison mediates the relation between ability-grouping practices and students' achievement expectancies in mathematics. *Journal of Educational Psychology, 81*(2), 178. https://doi.org/10.1037//0022-0663.81.2.178

Rosenberg, M. (1965a). Rosenberg self-esteem scale (RSE). Acceptance and commitment therapy. *Measures package, 61*, 52. https://doi.org/10.1037/t01038-000

Rosenberg, M. (1965b). *Society and the adolescent self-image* (Vol. 11). Princeton, NJ: Princeton University Press.

Rosenberg, M., Schooler, C., & Schoenbach, C. (1989). Self-esteem and adolescent problems: Modeling reciprocal effects. *American Sociological Review*, 1004-1018. https://doi.org/10.2307/2095720

Roy, A., Guay, F., & Valois, P. (2015). The big-fish–little-pond effect on academic self-concept: The moderating role of differentiated instruction and individual achievement. *Learning and Individual Differences, 42*, 110-116. https://doi.org/10.1016/j.lindif.2015.07.009

Salchegger, S. (2016). Selective school systems and academic self-concept: How explicit and implicit school-level tracking relate to the big-fish--little-pond effect across cultures. *Journal of Educational Psychology, 108*(3), 405-423. https://doi.org/10.1037/edu0000063

Schagen, I., & Schagen, S. (2002). A fair comparison: Selective v. comprehensive education. *Education Journal, 60,* 26-27.

Schmitt, D. P., & Allik, J. (2005). Simultaneous administration of the Rosenberg Self-Esteem Scale in 53 nations: Exploring the universal and culture-specific features of global self-esteem. *Journal of Personality and Social Psychology, 89*(4), 623-642. https://doi.org/10.1037/0022-3514.89.4.623

Seaton, M., Marsh, H. W., & Craven, R. G. (2009). Earning its place as a pan-human theory: Universality of the big-fish-little-pond effect across 41 culturally and economically diverse countries. *Journal of Educational Psychology, 101*(2), 403. https://doi.org/10.1037/a0013838

Siu, A. C. K., & Wu, J. (2012). Effect of ability grouping on self-esteem and academic self-concept: A comparison between Hong Kong and Australian adolescents. In S. De Wals & K. Meszaros (Eds.), *Handbook on Psychology of Self-Esteem* (pp. 393-402). Nova Science Publishers, Inc.

Steinhoff, A., & Buchmann, M. (2017). Co-development of academic interest and effortful engagement and its role for educational attainment in a tracked school system. *Research in Human Development, 14*(2), 122-142. https://doi.org/10.1080/15427609.2017.1305810

Stubbs, N. S., & Maynard, D. M. B. (2016). Academic self-efficacy, school engagement and family functioning, among postsecondary students in the Caribbean. *Journal of Child and Family Studies*, 1-8. https://doi.org/10.1007/s10826-016-0595-2

Suk Wai Wong, M., & Watkins, D. (2001). Self-esteem and ability grouping: A Hong Kong investigation of the Big Fish Little Pond Effect. *Educational Psychology, 21*(1), 79-87. https://doi.org/10.1080/01443410123082

Sung, Y.-T., Huang, L.-Y., Tseng, F.-L., & Chang, K.-E. (2014). The aspects and ability groups in which little fish perform worse than big fish: Examining the big-fish-little-pond effect in the context of school tracking. *Contemporary Educational Psychology, 39*(3), 220-232. https://doi.org/10.1016/j.cedpsych.2014.05.002

Trautwein, U., Lüdtke, O., Köller, O., & Baumert, J. (2006). Self-esteem, academic self-concept, and achievement: How the learning environment moderates the dynamics of self-concept. *Journal of Personality and Social Psychology, 90*(2), 334-349. https://doi.org/10.1037/0022-3514.90.2.334

Van Houtte, M., Demanet, J., & Stevens, P. A. (2012). Self-esteem of academic and vocational students: Does within-school tracking sharpen the difference? *Acta Sociologica, 55*(1), 73-89. https://doi.org/10.1177/0001699311431595

Van Houtte, M., & Stevens, P. A. (2009). Study involvement of academic and vocational students: Does between-school tracking sharpen the difference? *American Educational Research Journal, 46*(4), 943-973. https://doi.org/10.3102/0002831209348789

Vanfossen, B. E., Jones, J. D., & Spade, J. Z. (1987). Curriculum tracking and status maintenance. *Sociology of Education*, 104-122. https://doi.org/10.2307/2112586

Wyman, P. A., Cowen, E. L., Work, W. C., & Kerley, J. H. (2009). The role of children's future expectations in self-system functioning and adjustment to life stress: A prospective study of urban at-risk children. *Development and Psychopathology, 5*(4), 649-661. https://doi.org/10.1017/S0954579400006210

Zeidner, M., & Schleyer, E. J. (1999). The Big-Fish–Little-Pond effect for academic self-concept, test anxiety, and school grades in gifted children. *Contemporary Educational Psychology, 24*(4), 305-329. https://doi.org/10.1006/ceps.1998.0985

Zell, E., & Alicke, M. D. (2009). Contextual neglect, self-evaluation, and the frog-pond effect. *Journal of Personality and Social Psychology, 97*(3), 467-482. https://doi.org/10.1037/a0015453

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