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Participation or eschewal? Final-year secondary school students' attitudes towards participation in higher education in Cameroon

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In this article we examine students' attitudes towards participation in higher education in Cameroon and consider the role of personal and socioeconomic factors in their post-school educational trajectories. The data were drawn from a questionnaire survey of 1,860 final-year secondary school students from Yaoundé, Cameroon, as well as supplementary interviews with 16 students. The findings show that the majority of respondents indicated a preference to continue their education after the end of secondary school and participate in some form of higher education. However, contrary to previous studies that identify gender or SES segregation in higher education participation, the findings in this study suggest that the influence of SES and gender on students' attitudes was minimised in the later stage of secondary schooling. Among the relatively minor external influences, institutional factors surpass family influence, and fathers' influence is stronger than that of mothers, echoing the patriarchal cultural background in Cameroon. Considering the positive attitudes revealed in this study, it is suggested that more external efforts could be made to respond to students' optimistic attitudes and smooth their transition processes. Higher education institutions should improve their capability to enrol and accommodate more students and patriarchal culture should also be challenged to boost women's educational opportunities.

Keywords: attitudes; Cameroon; final-year students; gender; higher education; institutional factors; parents; participation; patriarchal culture; SES

Introduction

Increasing participation in higher education (HE) has long been considered a promising national strategy to promote socioeconomic growth and a useful tool for reducing social inequality for many countries, especially those in sub-Saharan Africa (SSA) (Bloom, Canning & Chan, 2006; United Nations [UN], 2015). In line with global growth patterns over the past decades, the overall HE gross enrolment ratio (GER) in SSA has increased from 3% in 1990 to 9% in 2017, with the number of students enrolled in universities rising from less than 1.2 million in 1990 to 8.1 million by 2017 (UNESCO Institute for Statistics [UNESCO-UIS], 2017). Despite this relative growth in the HE population, the GER for the SSA region remains low, compared with 78% for North America and Western Europe in 2017.

In the global North attention has shifted from policies aimed at increasing participation to those that focus on widening access, dealing with structural inequalities in the HE system and increasing the involvement of underrepresented groups, such as Black and minority ethnic students (BME), first-generation entrants, and students with disabilities (Bowers-Brown, 2006; Smith, 2011). On the other hand, studies carried out in SSA countries, such as Cameroon, have primarily focused on access to primary and secondary education, with limited research investigating the determinants of participation in post-compulsory education. This emphasis on primary and secondary provision is unsurprising and in line with international commitments – such as Education for All and the Sustainable Development Goals (SDGs) – that promote universal primary education in the first instance. However, the 2015 to 2030 SDG agenda also emphasises equal and affordable HE and lifelong education (UN, 2015).

According to Mohamedbhai (2014), HE in Africa is undergoing a process of massification, with several governments and higher education institutions (HEIs) facing challenges linked to an overwhelming demand for places and ensuring fair and equitable access to university. Countries such as Kenya, Ghana and Tanzania have implemented programmes to widen and increase access with emphases on reducing gender, socioeconomic status (SES) and ethnic inequalities (Morley, Leach, Lussier, Lihamba, Mwaipopo, Forde & Egbenya, 2010; Odhiambo, 2016). No such programme has been launched in Cameroon, and the HE participation rate in Cameroon remains low. Therefore, it is important to explore ways to improve HE participation in Cameroon. Understanding the factors predicting students' HE participation process is crucial. However, there are relatively few studies considering issues of HE participation in the SSA context, which have identified financial concerns, gender-biased enrolment and late entrants to HE (Lewin, 2009; Morley & Lussier, 2009). No research has investigated HE participation from students' perspectives.

Thus, in this article we report on students' attitudes towards HE and consider the factors that may influence their decisions regarding university attendance in Cameroon. Two research questions are addressed:

1) What are final-year secondary school students' attitudes towards participation in higher education in Cameroon?
2) What factors influence those students' attitudes towards higher education?

The attitudes towards participation in HE discussed in this article refer to the general attitude of final-year secondary school students towards all types of HEIs, without distinguishing between different types of HEIs. In answering the research questions, we first present the background of the education system in Cameroon and then review factors associated with students' attitudes towards participation in HE, followed by the presentation of research methods, data analysis, and findings. The article is closed with a discussion and concluding remarks.

Education System in Cameroon

HE in Cameroon is a complex system, due to the lengthy colonial past of the country. Simultaneous former colonies to Britain and France, the country's current education system consists of independent Anglophone and Francophone sections. Parallel Anglophone and Francophone schools exist from primary school to HE. The bilingual schools are, under most circumstances, a juxtaposition of two monolingual schools in one institution under the direction of a single school principal (Tatangang, 2011).

In addition to the different language sections, there are public and private schools, from nursery school to HE. Private and public education share the same system, except that the education providers are different. However, a distinguishable difference is that private schools are generally equipped with better facilities, have smaller classes, and are more costly to attend (Lewin, 2007). It has been suggested that private schools mainly meet the needs of wealthy people and public schools primarily satisfy the national education requirement in Africa (Lewin, 2007; Tikly, Lowe, Crossley, Dachi, Garrett & Mukabaranga, 2003).

In terms of HEIs, a difference between the public and private sectors is the level of tuition fees they charge. In Cameroon, the standard tuition fee for public universities is generally 50,000 Central African CFA franc (FCFA, approximately £70) per year, whereas fees for private institutions are more expensive and could be as high as 850,000 FCFA (£1,180) (Catholic University Institute of Buea [CUIB], 2020; Ministry of Higher Education [MHE], 2010). Therefore, students' perceptions of HE tuition fees and financial concerns can be a determinant of their attitudes towards HE participation.

Factors Influencing Students' Attitudes towards Participation in Higher Education

As the agency of participation, students' attitudes determine their post-school educational trajectories (Attwood & Croll, 2011). Students' attitudes are complicated and influenced by intersectional factors at the individual, family, institutional, and societal levels. According to a literature review of Western and other SSA countries, gender, SES, and parental characteristics are highlighting factors in these intersections. How these factors influence and whether those findings are applicable to the Cameroonian context are investigated in this article.

Gender gaps

Gender is a critical factor identified in the education transition process, and it was found to be distinguishing in students' HE aspirations and the actual participation process. For example, in an earlier 12-country study, Buchmann and Dalton (2002) found that females had higher aspirations for education, which was surprising considering the previously persisting contrary situation. Menon (2009) also reports empirical evidence that females have an advantage in the intention to pursue HE over male students. Both studies explained that the higher female aspirations mirrored the increasing rate of females in HEIs. A recent study undertaken in Australia also supports the female advantage of a higher level of aspiration for HE than males (Gale, Parker, Rodd, Stratton, Sealey & Moore, 2013). However, conflicting evidence also exists, where Attwood and Croll (2011) note that gender was not seen as a factor distinguishing students' attitudes and intentions towards HE in a large-scale secondary data analysis study undertaken in England.

In African countries, gender differences are more noticeable in the actual participation process, where underrepresentation of female students in education systems has been a feature of most African countries (Assié-Lumumba, 2006; Chege & Sifuna, 2006; Kane, 2004). Poor females were the most disadvantaged group in gaining access to education (United Nations Educational, Scientific and Cultural Organization, 2015). However, in the relatively deprived continent, students' attitudinal differences among genders have drawn little attention, although the gradually increasing actual participation rate can boost the higher intention of attending HE.

The specific gendered roles may vary in different national settings, but gender gaps have been widely recognised. In terms of the rationale of females being a disadvantaged group in education opportunities in Africa, some studies can be traced to the widespread patriarchal culture in Africa (Akala, 2019; Munene & Wambiya, 2019; Omwami, 2011). In a patriarchal cultural setting, females are subordinate to males, which undermines female positions by excluding them from participation in hierarchical socioeconomic structures (Akala, 2019; Omwami, 2011). Female educational opportunities are also limited by patriarchal culture when the family values sons over daughters, and in deprived situations, parents are more likely to invest in their sons' education

than their daughters' (Mudau & Obadire, 2017; Ombati & Ombati, 2012). According to Akala (2019), among the small number of women who have managed to escape the disadvantages of the patriarchal system and receive education, they are still exposed to caring and housework roles as they have previously experienced. Therefore, we aim to explore the persistent gender gaps on the African continent and the potential impact of patriarchy on students' HE participation in Cameroon.

Socioeconomic status (SES) and parental characteristics

Other factors that link to students' HE participation processes are their family SES and parents' characteristics (Berrington, Roberts & Tammes, 2016; Grim, Moore-Vissing & Mountford-Zimdars, 2019). Considering that parents' education levels and occupation types are key predictors of family SES, studies have used either family SES or parents' backgrounds separately. In this study, while examining the SES differences, the parents' roles were separately inspected to see whether there was any influential gap between fathers and mothers.

SES has been suggested to be related to students' educational aspirations. Students from higher SES families tend to have higher educational aspirations (Berzin, 2010; Fischer, Barnes & Kilpatrick, 2019), as their parents own more social and cultural capital to facilitate their aspiration or actual access to HE. Raising the aspirations of students, particularly low-SES students, has been a policy prominent in Australia for the last decade (Gale et al., 2013). However, empirical evidence also suggests higher aspirations to attend HE among disadvantaged youth. For example, in a survey conducted with Melbourne's low-SES students, approximately 85% of them aspired to attend some form of HE (Bowden & Doughney, 2010). A similar figure was revealed in Gale et al.'s (2013) study in Central Queensland, Australia. Therefore, it is worth exploring the relationship between SES and students' aspirations in specific national settings.

The role of parents has been discussed, primarily under the SES discourse, including parents' education levels and occupations (Baker, Sammons, Siraj-Blatchford, Sylva, Melhuish & Taggart, 2014; Berrington et al., 2016; Rimkute, Hirvonen, Tolvanen, Aunola & Nurmi, 2012). Other studies also explored the role of parental attitudes in shaping students' attitudes towards participation in HE (Grim et al., 2019; Kirk, Lewis-Moss, Nilsen & Colvin, 2011; Rimkute et al., 2012). Parents' educational and occupational backgrounds played an important role in predicting students' actual participation in HE. It was found that students with parents who had received HE were 4.5 times more likely to attend HE in Organization for Economic Cooperation and Development (OECD) countries (OECD, 2015), with mothers being more influential than fathers in this regard. In Ghana and Côte d'Ivoire, if a mother had received secondary education, her children had seven times the chance of attending HE than those of an unschooled mother. For fathers who had received secondary education, this figure was four times the chance (Schultz, 2004). In the United Kingdom (UK), students with lower-skilled parents were found to have lower aspirations for HE (Berrington et al., 2016). Parental attitudes are positively related to students' educational aspirations. If parents are encouraging, the students will have higher aspirations for attending HE (Benner & Mistry, 2007). In Gale et al.'s (2013) study, 84% of Australian students reported that their parents' views were important or extremely important in formulating their future plans, especially whether or not to attend university.

Previous studies have supported the capital theory developed by Bourdieu, and SES and parental characteristics are considered to be key predictors of an offspring's educational experiences. However, the way in which these factors exert their specific role in Cameroon may differ, given the different national contexts. Therefore, we explore whether and how gender, SES and parental characteristics are influential in students' aspirations towards participation in HE in Cameroon.

Methods

A mixed-method research design was employed in this study. This design was quantitative-method dominated, to primarily investigate the under-researched area of students' attitudes (Walker & Baxter, 2019). The intention was to use large-scale data to inform patterns of students' attitudes towards HE participation when there was a lack of knowledge about it. We further complemented those patterns with experiences and explanations from selected students, by collecting qualitative interview data from them. In so doing, we were able to better understand the sociocultural contexts shaping the identified patterns in Cameroon. In total, a questionnaire survey in 12 secondary schools with 1,860 final-year students in Yaoundé (the capital city) were conducted, followed by interviews with 16 students.

The schools were selected as representative and included a range of different types, such as Anglophone, Francophone, public and private schools. As previously mentioned, bilingual schools are somehow a juxtaposition of two monolingual schools in one institution. Therefore, the bilingual schools were regarded separately as Anglophone schools and Francophone schools in this study. To ensure that the interviewees shared similar school experiences, they were selected from

students who volunteered to be interviewed at two of the 12 schools. The two schools included a private school and a public school, where private school students came from relatively better-off families compared with their public school counterparts. Gender and subject streams were also taken into consideration. Ethical approvals were granted from both a UK institution and the Centre Region Delegation of Ministry of Secondary Education in Cameroon. Consent was gained from headteachers, teachers and the students themselves.

Data Analysis

Our data analysis followed two stages. In stage one, questionnaire survey data were analysed using both descriptive analysis and a logistic regression model. Descriptive analysis of the main characteristics of the samples was conducted first (cf. Table 1), followed by an assessment of the gender and SES effect size on students' attitudinal variables. A logistic regression model was then developed to identify key determinants of students' attitudes towards HE participation. Effect size was measured to demonstrate the magnitude of a certain effect, e.g., gender and SES. According to Cohen's categorisation, 0.2 indicates a small effect, 0.5 a medium effect, and 0.8 or higher, a large effect (Pallant, 2013).

In the logistic regression model, predictors are listed as a series of "blocks" (cf. Table 5). The first block contains students' personal factors: gender, age, religion, and academic achievement (AA). The second block includes factors relating to parents' characteristics, such as students' perceived parental attitudes, parents' education level, and occupation type. The third block comprises institutional variables, including the subject stream, secondary school language of instruction, and type of school. The final block contains students' financial concerns regarding tuition fees. Two-category nominal variables are converted into dummy variables in the model. For the illustration, males are coded as 1 and females as 0. The attitudinal variables in the final block are ordinal variables that were applied directly to the logistic regression model.

In stage two we used thematic analysis (Braun & Clarke, 2006) to identify themes that emerged from students' narratives in the interviews. Those themes relate to the impacts of gender and SES in Cameroon, further explaining patterns shown in the survey findings about students' attitudes towards HE participation. In the next section we firstly present descriptions of students' characteristics. We then report on the gender and SES patterns of students' attitudinal variables. The patterns are supplemented by interview data to make better sense thereof in Cameroonian contexts and cultures.

Findings

Students' Characteristics

One thousand eight hundred and sixty final-year students from selected schools completed the questionnaire. A summary of their characteristics is presented in Table 1.

Table 1 Students' characteristics (with majority group percentages (%))

School number	Public or private	Gender (*N*)		Age	Religion	Father's occupation	Mother's occupation	Father's education	Mother's education
		Male	Female						
1	Private	57	56	17(23)	Chris*.82	Pro*.36	Pro.30	HE60	HE44
2	Public	87	91	19(23)	Chris.88	Pro.27	House36	HE & SEC*33	SEC44
3	Private	62	77	17(24)	Chris.98	Pro.30	Sale29	HE56	HE47
4	Public	172	238	18(30)	Chris.94	Pro.28	Sale33	HE46	SEC43
5	Public	81	140	18(30)	Chris.95	Pro.25	House31	HE36	SEC45
6	Public	74	106	18(30)	Chris.88	Pro. & Sale21	Sale35	HE47	SEC39
7	Private	10	12	21(32)	Chris.91	Sale37	House70	SEC42	SEC35
8	Public	28	27	18(33)	Chris.84	Pro.31	House46	HE39	SEC53
9	Public	190	202	18(27)	Chris.91	Pro.26	House35	HE47	SEC49
10	Private	23	27	17&21(18)	Chris.92	Sale30	House45	SEC38	SEC45
11	Private	15	22	18(42)	Chris.82	Pro.38	Sale31	HE60	HE52
12	Private	18	34	17(43)	Chris.91	Pro.40	Sale25	HE68	HE52
Total		817	1,032	18(28)	Chris.91	Pro.27	House30	HE45	SEC42

Note. *Chris. – short for Christian; Pro – short for professional; SEC – short for secondary education.

This table reveals some common patterns across participating schools. Firstly, there were more female than male final-year students in the majority of schools. Considering the unbalanced gender distribution of students participating in HE in Cameroon (UNESCO-UIS, 2017), it was somewhat surprising that many female students remained at school for the final year of secondary schooling. The dominant religion of students was in line with the national demographic (Bureau of Democracy, Human Rights, and Labor, United States Department of State, 2018). Most students were aged 17 and 18, and some were aged up to 21. This range is consistent with that of many SSA countries. For example, in Ghana, the senior secondary school ages range from 14 to 20 years old (Lewin, 2009). This wide age range is either because of late entrants or a repetition of particular grades.

In terms of parental occupation types, most fathers were professionals, but in three schools most fathers were in sales and services. Mothers' occupations were mostly that of housekeepers, followed by sales and service workers. At only one school the highest proportion of mothers (30% in School 1) were professionals. It appears that housekeeping was the main responsibility of women in the family, and fathers tended to have professional occupations and were the breadwinners. With respect to parents' education levels, the fathers' education levels were mainly HE in 10 of the 12 schools. Most mothers attended only secondary education in eight of the 12 schools. The parental education level distribution is relatively consistent with the distribution of parents' occupation types. Both indicate that fathers tended to have higher-status occupations and HE levels than mothers, suggesting a masculine culture in Cameroon (Nsamenang, 2000).

Gender and SES Patterns of Students' Attitudinal Variables

In this section we present the questionnaire and interview data regarding gender and SES patterns of students' attitudes towards participation in HE, including students' personal attitudes, their perceived parental attitudes, and their attitudes towards tuition fees. Students' attitudes ranged from 1 (*Disagree a lot*) to 4 (*Agree a lot*), and negative items were coded in the reverse. Mean values and standard deviations were also presented to identify the attitudinal differences. In terms of students' personal attitudes towards participation in HE, no gender differences were discovered, as boys and girls both had broadly positive attitudes (cf. Table 2). Only one small effect size value (0.20) was identified from the SES difference, whereas higher SES was slightly positive in attitudes towards "I think getting a degree will help me to earn more money."

Table 2 Gender and SES groups in students' personal attitudes

Themes		Gender	*N*	*M*	*SD*	Effect Size
I think getting a degree will help me to have a successful career	Gender	Male	812	3.25	.845	0.09
		Female	1,023	3.33	.856	
	SES	High	497	3.41	.809	0.18
		Low	647	3.26	.867	
I think getting a degree will help me to earn more money	Gender	Male	784	2.99	.879	0.10
		Female	1,006	3.08	.905	
	SES	High	481	3.16	.860	0.20
		Low	632	2.98	.918	
I think going to university will help develop my confidence as a learner	Gender	Male	803	3.38	.844	0.01
		Female	1,005	3.37	.852	
	SES	High	487	3.48	.758	0.12
		Low	645	3.38	.852	
I admire people who go to university	Gender	Male	791	2.83	1.036	0.03
		Female	997	2.80	1.024	
	SES	High	479	2.86	1.013	0.02
		Low	638	2.84	1.035	

According to Table 3, two small effect size values (0.21 and 0.48) were revealed from the SES groups, and higher SES students were slightly more confident in terms of "My parents encourage me to go to university." Regarding parents as good role models, higher SES students were also more positive in this regard, and the effect size value (0.48) was almost up to a medium effect. Gender again showed no effect on students' perceived parental attitudes.

Table 3 Gender and SES groups in students' perceived parental attitudes

Themes			*N*	*M*	*SD*	Effect size
My parents think that going to university is important	Gender	Male	807	3.33	.915	0.03
		Female	1,019	3.30	.956	
	SES	High	494	3.45	.890	0.19
		Low	651	3.27	.959	
My parents encourage me to go to university	Gender	Male	796	3.25	.956	0.06
		Female	1,014	3.19	1.013	
	SES	High	490	3.38	.946	0.21
		Low	646	3.17	1.008	
My parents are good role models for influencing me to go to university	Gender	Male	791	2.95	1.056	0.02
		Female	1,007	2.93	1.081	
	SES	High	493	3.28	.942	0.48
		Low	638	2.79	1.064	

These statements were supported by interview data with students noting that their parents were positive about their access to HE, and no distinct gender or SES differences were revealed from students' reflections in the interviews. For example:

> *My parents are very much … they very much encourage me to continue studies after the GCE A/L* [The General Certificate of Education Advanced Level]. *So when family members are encouraging you to do so, then I don't think anything will stop me from considering (to continue studies).* (Joy, female, private school)
>
> *My parents are all d'accord (alright), they are ok, for me to continue my education. And yeah, they will pay for me* (Christian, male, private school).

Some students further explained that their parents not only encouraged them to continue studies, but also provided suggestions regarding the type of HEI to attend: "*I've talked about it (plan to study) with my parents; they are even the ones who told me I'd better go to a professional school*" (Laura, female, public school). Parents' positive attitudes also appeared in the way in which students' parents financially supported them to attend HE, which was directly linked to students' attitudes towards financial concerns. Consistent with the positive parental attitudes perceived by students, they were overall less concerned with financial issues. In terms of students' attitudes towards tuition fees, gender had two small effect size values (0.21 and 0.20), and SES had one small effect size value (0.23, cf. Table 4). To illustrate, male students were slightly more concerned about fees than female students. Although, in the interviews, male students could identify parents' favour of their education over that of girls, which was consistent with previous studies (Aderinto, Akande & Aderinto, 2006; Brock & Cammish, 1997). The boys also experienced financial pressure as they believed that they were going to be breadwinners and they wanted to be independent sooner rather than relying completely on their parents. Therefore, more male students mentioned having part time jobs while at university.

Table 4 Gender and SES groups in students' attitudes towards tuition fees

Themes			*N*	*M*	*SD*	Effect size
My family will pay my tuition fees if I go to university	Gender	Male	807	3.22	.925	0.21
		Female	1,019	3.40	.836	
	SES	High	491	3.43	.788	0.18
		Low	648	3.27	.923	
I will need to have a part-time job to cover my costs if I go to university	Gender	Male	801	1.72	.916	0.20
		Female	1,003	1.91	.980	
	SES	High	484	1.87	.991	0.13
		Low	647	1.75	.908	
I worry about paying my tuition fees if I go to university	Gender	Male	792	2.52	1.100	0.19
		Female	1,003	2.73	1.121	
	SES	High	484	2.80	1.104	0.23
		Low	642	2.54	1.114	
I will only be able to go to university if I can get financial support from outside my family	Gender	Male	792	2.75	1.147	0.15
		Female	996	2.92	1.126	
	SES	High	482	2.99	1.096	0.18
		Low	637	2.79	1.160	

Gender and SES both had very limited effects on students' attitudes towards participation in HE, which was echoed by the highly skewed proportion of students wishing to attend HE. However, the aspiration of attending HE is complex and related to many other factors; therefore, a logistic model was employed in the following section to detect the contributing factors holistically and examine the extent of influence from each related variable. In addition, rather than exploring the SES factor as a whole, the parents' education level and occupations

were detected separately in the model to perform a nuanced analysis of their specific roles.

Factors Contributing to Students' Attitudes Towards Participation in HE

Table 5 presents the results of four logistic regression models examining the relationship between student background factors and attitudes towards participation in HE.

Table 5 Odds ratios for logistic regression models of HE attitudes

	Model 1	Model 2	Model 3	Model 4
All students – likelihood of wishing to participate in HE				
Gender	1.08	0.87	0.90	0.87
Age	0.86	0.93	0.91	0.89
Religion	1.21	0.93	0.98	0.95
AA	1.21	1.23	1.27	1.24
Parents' attitudes		1.65	1.63	1.70
Fathers' education		1.33	1.41	1.37
Mothers' education		1.24	1.14	1.17
Fathers' occupation		1.07	1.09	1.14
Mothers' occupation		0.87	0.86	0.86
School language			0.85	0.95
School type			1.47	1.42
Subject stream			1.22	1.25
Tuition Fee				0.84
N	1,733	1,084	1,068	1,054
% predicted correctly (75.4 base)	75.5	77.5	77.6	78.1
Nagelkerke R^2	0.027	0.091	0.102	0.108

The figures are the odds ratios associated with each variable and represent the increase or decrease in the likelihood of students' willingness to participate in HE. Where the odds ratio is greater than one, it indicates that a characteristic, such as being Christian, is associated with an increased chance of students wishing to attend HE. For continuous variables, such as AA, the odds ratio indicates that as a unit increases in AA, the change in the odds of students wishing to participate in HE is 1.2.

The first model included only students' personal predictors, such as gender and age, and it had a small Nagelkerke R^2 of 0.03, which increased only 0.1% of the percentage of cases predicted correctly (PCPC). This means that students' personal predictors only increased by 3% in the variance in students' willingness to participate in HE. According to this model, among personal predictors, AA and religion both had an odds ratio of 1.21. This suggests that higher AA and Christian students are 1.21 times more likely to have proactive attitudes towards HE participation than their counterparts, in line with the widely discussed relationship between AA and aspirations for HE (Baker et al., 2014; Moulton, Sullivan, Henderson & Anders, 2018). Nevertheless, the influence of religion was reduced when other predictors were included in the model. Unsurprisingly, gender was not crucial in distinguishing students' attitudes towards HE – male and female students shared similar proactive attitudes.

The inclusion of parental predictors in the second model resulted in an increase in the Nagelkerke R^2 from 0.03 to 0.09 and an increase in the PCPC from 75.5% to 77.5%. The largest odds ratio of 1.65 was found for parental attitudes. This means that, for a unit increase in students' perceived parental attitudes, students were 1.65 times more likely to be positive about participation in HE. The fathers' education levels had a substantial impact on students' attitudes compared to the mothers' education levels and parents' occupation types. Students whose fathers had received HE were 1.33 times more likely to desire participation in HE. These figures quantify the impact of perceived parental attitudes discussed above, where students mentioned their fathers' opinions when talking about their parents' attitudes and influence. For example, according to Manga (female, private school), her choice of HEI was determined by her father. She said*:* "*My plans … well, it depends on my dad actually. He is the one to decide on that. Send me to private school or public ones. But I think he will like me to go to a professional school.*" The relatively outstanding influence of fathers echoes the patriarchal culture in Cameroon.

The third model took secondary school factors into consideration: secondary school language (Francophone = 0, Anglophone = 1), secondary school type (public = 0, private = 1) and subject stream in secondary school (Arts = 1, Science = 0). These factors as a whole showed a small increase in Nagelkerke R^2 and PCPC, yet secondary school type had a major impact on students' attitudes. According to the odds ratio, students from private schools were 1.47 times more likely to have high aspirations for HE participation. Additionally, the inclusion of secondary school factors weakened the

influence of the mothers' education levels. Students were unlikely to remain in school if they did not enjoy the experience (Payne, 2003). Positive secondary school experiences could play a role in easing students' transition to HE. This is supported by the interview data. Private school students were more satisfied with their schooling experiences.

> *The school, it just has been very well, I understand the teachers, what they explain, they direct us on how to take our lives. My classmates, they are comfortable, they are like family* (Oriana, female, private school).

However, the opinions of students from public schools were more restrained and neutral. A girl mentioned that she liked the teachers and that the classes that she attended were important, but the classes and knowledge the school provided were not enough, she would prefer more classes to get herself ready for passing the GCE A/L. This could also be supported by the number of students who were reluctant to continue their studies, with only one out of five students coming from a private school.

The last model included student concerns regarding tuition fees. However, this did not have much impact on students' attitudes towards HE, and the increases in Nagelkerke R^2 and PCPC were minor. As reported above, most students were not concerned with the tuition fees in HE; they believed that their families and themselves would make attending HE affordable. This conflicts with evidence that the financial burden was still a key attribution to school dropout in SSA countries (Arthur & Arthur, 2016; Asamoah, 2017; Morley et al., 2010). The conflict might be because the students in our study were already the ones selected who could remain in the schooling system until the final years of secondary school, implying that their families could afford to support them in education through university.

In summary, model 3 offers the best compromise between explanatory power and parsimony. The model suggests that parental attitudes and secondary school predictors have the largest impact on students' attitudes towards HE. Gender and SES influence did not effectively contribute to students' attitudes towards participation in HE. The interview data reveals that parents, particularly fathers, played an important role in shaping students' HE attitudes and they can also be the ones that determine their education opportunities, which reflects the cultural patriarchal influence in Cameroon. In terms of the secondary school predictors, private schools can provide a better education and attract relatively wealthy families. Students from the private schools were also more satisfied with their schooling experience, which could ease their transition from high school to university.

Discussion

Our study suggests that, firstly, students in Cameroon were generally positive about participation in HE, and the widely discussed influences of gender and SES were minimal at this stage. It is possible that students who have stayed until the final year of secondary school were keener to receive HE, and they might have overcome barriers to remain in the schooling system, such as academic failure and financial difficulties. Students who were not willing or able to attend HE might have dropped out before the final year, so in a sense, the respondents in the study were already a self-selected group. This is supported by Eloundou-Enyegue, Ngoube, Okene, Onguene, Bahoken, Tamukong, Mbangwana, Essindi and Djongoue (2004), who found that in Cameroon, approximately 58% of students participated in secondary school, whereas only 25% reached the final year. However, although gender and SES had no impact on students' attitudes towards participation in HE, this does not necessarily mean that they have no influence on students' actual participation process. Considering the overall gender gaps and SES patterns of HE participation in Cameroon, students might encounter barriers in the actual participation process. This can be particularly true for females, as the gender gaps in the actual participation rate in SSA persist, although their strong desire to continue HE in this study is encouraging. Another possible explanation of the low national HE participation rate in Cameroon might be the limited capacity of HEIs to enrol students. For example, in Kenya, less than 20% of qualified candidates gain access to HE (Odhiambo, 2016). Similarly, in Ghana, the inadequate capacity of HEIs is still a constraint for the country (Arthur & Arthur, 2016). Therefore, the assumption is that although students generally wish to continue HE, not all of them can gain access. As such, measures need to be taken either at an earlier stage to increase students' resilience in school or to increase the capacity of enrolling students in Cameroonian HEIs at a later stage and smooth their transition process.

In terms of parental influence, both numerical and narrative data from our study suggest that the prominent predictor was students' perceived parental attitudes, and the impact of the fathers surpassed that of the mothers. It supports the widely discussed parental influence on children's aspirations for and participation in HE and challenges mothers' important role in this regard (Berzin, 2010; Gale et al., 2013). Previously, mothers' roles were suggested to surpass those of fathers in many empirical studies (e.g., Rimkute et al., 2012; Schultz, 2004), whereas our statistics show that fathers' influences were greater than those of mothers. Students also talked more about

their fathers' opinions than their mothers' in the interviews, indicating that fathers had a more important role in their family and in students' education opportunities. This finding could be explained by the dominant patriarchal culture in Cameroon, in which families are structured around the supremacy of men and subordination of women (Cameroon Government Report, 2011; Nsamenang, 2000).

Institutional predictors, particularly secondary school type (public/private), had a substantial impact on students' HE participation and attitudes. Private school students were more positive towards participation in HE. Although the impact of institutional predictors could be traced to parental and SES background, the direct influence of secondary school exceeded that of SES, and it also implied that schools played a role in strengthening the institutional gaps in terms of students' aspirations to attend HE.

Conclusion

This study shed light on an under-researched area of students' attitudes towards HE participation in Cameroon, and it detected the previously widely discussed gender and SES segregations in predicting students' aspirations towards participation in HE. Surprisingly, and conflicting with the overall lower national HE participation rate, students exhibited strong agency and willingness to continue HE, regardless of their gender and SES backgrounds. Therefore, rather than increasing the HE aspirations of this group of students, more attention should be given at an earlier stage to promote their resilience in school, and for those groups of students, more efforts can be made to facilitate their actual access to HEIs.

Specifically, interventions to increase HE participation should extend beyond the students themselves. Governments, institutions, and families all play important roles in creating a school-friendly environment for students to remain in school and access HE. To illustrate, governments and HEIs should make efforts to increase their capacity to accommodate more students in HE. Furthermore, the influence of a patriarchal society needs to be considered with regard to female students' participation in HE. The fathers' roles transcend that of mothers, as does the deprecation of female education in this cultural setting. Although a significant gender difference was not identified concerning students' attitudes, female students' actual participation rate in HE needs further investigation.

This study had several limitations. Firstly, although we aimed to have as representative samples as possible, our data should be interpreted bearing in mind the characteristics of students. This was particularly relevant regarding the interview data, as the 16 student interviewees were from only two schools and were all Anglophone students. Secondly, while our study addressed a research gap of students' perspectives, future studies can include other stakeholders' (e.g. parents', teachers') perspectives on participation in and access to HE in Cameroon. The multiple perspectives from different stakeholders (and with diverse demographic backgrounds) will help understand impacts of gender, SES, religion, and other social factors on students' attitudes towards HE participation.

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Authors' Contributions

Tongtong Zhao wrote the manuscript and collected data for the paper; Yuwei Xu reviewed and edited the manuscript.

Notes

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