Perceived family economic hardship and student engagement among junior high schoolers in Ghana

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ABSTRACT

Research has shown that several factors influence student engagement, but little is known about the predictive role of family economic hardships on student engagement, particularly in the sub-Saharan African context. This study used data from junior high school students in Ghana to examine the association between perceived family economic hardship and students' classroom engagement, and the intervening role of future intentions. The structural equation modeling results indicate that perceived economic hardship is associated with behavioral engagement in school in two ways. The first is the direct positive link from perceived economic hardship to engagement (i.e., the *motivational pathway*). The second is a more nuanced channel whereby perceived economic difficulties are negatively associated with students' participation in academic work, but only through the inconsistent mediating (suppression) role of students' future intentions (i.e., *the demoralizing pathway*). The nuanced psychological and behavioral outcomes suggest the need for programs that cultivate educational resilience among young people.

1. Introduction

Many educationists and intervention researchers focus on student engagement because it is one of the most malleable predictors of academic success (Christenson, Reschly, & Wylie, 2012). Engaged students are those who invest time and efforts in academic work, get involved in school activities, connect with the people at school, and share the goals and values of their school (Appleton, 2011; Fredricks, Blumenfeld, & Paris, 2004; Skinner, Kindermann, & Furrer, 2009). Research has also shown that adolescents' engagement in schoolwork is essential to positive educational outcomes such as academic performance and low attrition rates (Archambault, Janosz, Fallu, & Pagani, 2009; Christenson et al., 2012; Kelly, 2008; Shernoff, 2013).

The importance of adolescents' engagement in school raises interests in the factors that predict school engagement. It also raises empirical questions about the mechanisms and pathways that underlie the relationship between student engagement and its predictors. To understand student engagement better, this study looks beyond prediction to focus on the explanatory mechanisms, which is one of the primary objectives of applied social science (Cheung & Lau, 2008). The study pays particular attention to the potential mediating role of students' future intentions.

Active student engagement is rarely the consequence of a single factor or mechanism. Research from developed and developing countries suggests that many factors, including, students' traits, socio-demographics, household characteristics, and school environment predict student engagement (Ansong, Okumu, Bowen, Walker, & Eisensmith, 2017; Urdan & Schoenfelder, 2006; Wentzel, Battle, Russell, & Looney, 2010). For instance, through peer relationships, students can model positive behavior that enhances engagement with their school environment (Ansong et al., 2017; Martin & Dowson, 2009). Also, studies in general, show that adolescents from households and neighborhoods experiencing economic strain are at high risk for school dropout, poor behavior habits, and other educational problems that typify lack of engagement (Ansong, Wu, & Chowa, 2015; Demanet, Van Praag, & Van Houtte, 2015; Donnellan, Conger, McAdams, & Neppl, 2009; Duncan, Brooks-Gunn, & Klebanov, 1994; Jariah, Husniyah, Laily, & Britt, 2004; Kiely, Leach, Olesen, & Butterworth, 2015). However, beyond real financial hardship, does the mere perception of financial difficulties affect how students engage with their school? Among the multiplicity of students' level of engagement, perhaps one of the strongest predictors of student engagement is students' perception of their families' financial hardship.

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Perceived family financial hardship may be an especially important construct among young people because students are typically not aware of the actual finances of their families, so they often infer from signals from their parents' financial behavior (De Haan & MacDermid, 1999). Whether their perceptions reflect the actual family financial situation or not, young people's perceived family financial hardship can have adverse consequences. Research shows that perceived financial hardship affects cognitive functioning (Al Hazzouri, Elfassy, Sidney, Jacobs, & Yaffe, 2017), health (O'Neal, Arnold, Lucier-Greer, Wickrama, & Bryant, 2015) and emotional health (Bradley et al., 2009). Based on prior studies, it is expected that similar perceptions of household financial hardship among young people would affect their level of school engagement. However, the pathways through which such perceptions lead to changes in student engagement are not clear. Despite the vast body of research on school engagement, the predictive potential of perceived family economic hardship on adolescents' school engagement is underdeveloped, particularly in low-resource countries. Drawing on existing research on the psychological impacts of economic hardship, it is possible that there are mediating mechanisms through which perceptions of household economic hardship shape student engagement, but we have little empirical evidence about these mechanisms in resource-limited countries.

In response to the need for further empirical work on the explanatory mechanisms by which perceived household financial hardship relates to student behavioral engagement, the current study uses data from adolescents in junior high schools in Ghana to address two research questions: (a) is there a direct relationship between perceived family economic hardship and student behavioral engagement? (b) is there an indirect relationship between perceived family economic hardship and students' behavioral engagement through the mediating role of psychological factors such as students' level of certainty about their future? A better understanding of the nuances of the direct and indirect links between perceived family economic hardship and student behavioral engagement could offer insights into possible areas where targeted intervention could be deployed to foster student engagement for better educational outcomes.

2. Actual and perceived economic hardship

From a macroeconomic perspective, economic conditions in Ghana have improved remarkably over the past three decades. The country's gross domestic product per capita increased from $200 in 2000 to $1858 in 2013. Ghana also attained a lower-middle income status in 2010. Despite these macroeconomic growth indicators and a significant reduction in the incidence of poverty, household poverty remains high, especially in rural areas. Data from the sixth round of the Ghana Living Standards Survey (GLSS) show that about 24% of Ghana's population is poor based on the absolute poverty line of $1.83 per day (Ghana Statistical Service, 2014a). The poverty incidence is particularly worse in areas such as the rural savannah where the poverty incidence is as high as 55%. The evidence from objective macroeconomic indicators that a significant number of Ghanaians remain in poverty is also matched by perceptions of continued economic hardship and inequality (Addai, Opoku-Agyeman, & Amanfu, 2014; Addai & Pokimica, 2010; Arku, Filson, & Shute, 2008; Tsai & Dzorgbo, 2012). As Pokimica, Addai, and Takyi (2012) explain, "there has been a widespread feeling among Ghanaians that their living conditions have not benefited proportionately" (p. 63). The literature on the social subjective poverty line and subject economic well-being suggest that real financial strain is the most robust indicator of subjective economic well-being (Cracolici, Giambona, & Cuffaro, 2012; Pradhan & Ravallion, 2000).

Thus, given the strong connection between actual and perceived economic condition in the literature, it is expected that both real and perceived economic hardship would have implications on educational outcomes. For instance, Ansong et al. (2015) point out that when students feel confident in their parents' capability to afford school expenses, they are more likely to remain in school. Similarly, family economic hardship is a primary reason why one-sixth of children between 7 and 14 years in Ghana engage in economic activities (Krauss, 2013). Many parents from the high-poverty rural and northern regions of Ghana cannot afford schooling costs, including transportation. When students are unable to walk long distances to school because of the lack of transportation, they often report to school late or miss school entirely, thus affecting the extent and quality of their school engagement (Human Rights Watch, 2017). Several empirical studies point to how personal and household financial difficulties negatively predict educational outcomes such as academic performance, academic expectations, and school completion (Ansong et al., 2015; Chowa, Masa, Osei-Akoto et al., 2015; Chowa, Masa, Ramos, & Ansong, 2015; Nam & Ansong, 2015).

3. Student behavioral engagement

Student engagement is a multidimensional construct that consists of behavioral (e.g., effort, perseverance, help-seeking), cognitive (e.g., strategy use, meta-cognition), and affective dimensions (e.g., feelings, interests, and attitudes towards school) (Archambault et al., 2009; Lee & Jonson-Reid, 2016). The current study focuses on the behavioral component of student engagement because, among the different domains of student engagement, the behavioral component is one of the strongest predictors of student achievement and school dropout (Archambault et al., 2009). Behavioral engagement comprises students' participation and involvement in their school's social activities and academic tasks including extra-curricular activities and classroom activities (Fredricks et al., 2004).

Studies indicate that adolescents with limited involvement and participation in school-related tasks are at a higher risk of juvenile delinquent behaviors, drinking problems, aggressive behaviors, sexual risk-taking behaviors, and teenage pregnancy (Ho, Lempers, & Clark-Lempers, 1995; Mistry, Vandewater, Huston, & McLoyd, 2002; Parish, Rose, Grinstein-Weiss, Richman, & Andrews, 2008; Puff & Renk, 2014; Wadsworth et al., 2013). These behavioral problems, in turn, affect students' subject retention and academic performance (Pridmore & Jere, 2011; Woldehanna & Hagos, 2015). On the other hand, research suggests that school engagement fosters attentive, curious, optimistic, passionate, and motivated students who have a yearning for knowledge and excellence (Jang, Kim, & Reeve, 2012; Liem & Martin, 2012; Skinner, Kindermann, Connell, & Wellborn, 2009; Van Ryzin, Gravely, & Roseth, 2009). Engaged students exhibit high self-esteem, contribute to the learning discourse, and foster a positive learning environment for all students (Carini, Kuh, & Klein, 2006). While research has successfully identified the outcomes of adolescents' behavioral engagement, very few studies have examined the economic precursors of behavioral engagement among adolescents in developing countries.

4. Education development and student engagement in Ghana

Many education policies and initiatives introduced in Ghana since the 1990s, including the Free Compulsory Universal Basic Education (FCUBE) policy of 1996, the Capitation Grant of 2004 to pay for school fees, and the School Feeding Program of 2005, have helped improve children's participation in education, particularly at the primary and junior high school levels (Ansong et al., 2015). Data from the World Bank's World Development Indicators show that over the last 15 years, Ghana has reduced by more than half the number of out-of-school children who are supposed to be in primary school (i.e., from 1.1 million in 1999 to 428,604 in 2015). Over the same period, the junior high school completion rate increased from 53.3% to 69.1%. Clearly, more young people in Ghana are participating in the education system.

However, beyond showing up at school, the extent to which children are engaged in their schoolwork is not clear. With the country's gross enrolment ratio (105%) and primary completion/survival rate

(112.4%) meeting the Millenium Development Goal (MDG) target of 100 by the year 2015 (Republic of Ghana & United Nations, 2015), it may be the right time to begin paying more attention to indicators of quality education experience, including student engagement. Thus far, literature on student engagement in Ghana is limited.

5. Linking perceived family economic hardship to student engagement

With this study's focus on the economic antecedents of student behavioral engagement, we hypothesize two possible pathways, mediated and unmediated, by which perceived family economic hardship is associated with student engagement. Martin Seligman's theory of learned helplessness (Maier & Seligman, 1976) provides a general framework to understand how conditions such as perceptions of family economic hardship affect students' behavioral engagement in school. The theory explains that when individuals feel helpless about achieving certain outcomes, they become discouraged and lose their motivation to pursue their goals, which could result in inappropriate behavior such as disengagement in the classroom (Yates, 2009). Attributions, the factors that stimulate learned helplessness, can be classified along three dimensions: internal or external (locus of causality), global or specific (specificity), and stable or unstable (stability) (Weiner, 2012). Internal attributions are stimuli that an individual perceive as residing or emanating from within them (e.g., cognitive abilities), while the external attributions are those thought to emanate from the contextual or external environment (e.g., inadequate school infrastructure) (Valås, 2001). Global attributions are stimuli that apply to everyone (e.g., lack of school in a community), while specific attributions are stimuli unique to a particular situation or individual (e.g., distance from one's home to school). Stable attributions have a historical dimension in that they are believed to happen across time, but unstable attributions occur only at one point in time (Valås, 2001). As to whether one's perceived circumstance would lead to learned helplessness depends on whether they assess the situation through the lens of one or more of the attributions above. Next, we discuss two pathways by which stimulus such as perceived household financial hardship may or may not lead to learned helplessness.

5.1. The mediated pathway

We posit that adolescents who view family economic hardship as a combination of stable, global, and external stimulus might experience a higher probability of learned helplessness. If an individual classifies financial difficulties as a *stable attribution*, it could have negative implications on their hope for the future because of the tendency to use their prior negative experience of family economic hardship (e.g., inability to afford school supplies) as a frame of reference (Shah, Mullainathan, & Shafir, 2012). Likewise, classifying financial difficulties as a *global attribution* may lead to learned helplessness: if adolescents know of other people in their communities who could not progress in their education because of financial challenges, they may be conditioned to expect their family economic hardship to lead to similar negative outcomes. Similarly, when difficulties are perceived to be an *external cause*, it might exacerbate learned helplessness because when adolescents are not sure about their ability to control their circumstances (including their financial challenges), they risk developing helplessness (Maier & Seligman, 1976). In this study, we expect that adolescents who view their family economic hardship as global, stable, and external will be uncertain about their future education, and this may lessen their engagement in school, as illustrated by *paths a* and *b* in Fig. 1.

Besides the theoretical support for a mediated pathway, a handful of empirical studies have explored mediating factors that explain the indirect links between financial resources and student engagement. A longitudinal study by Conger et al. (2012) show that family economic hardship indirectly affects student behavior through its impact on parenting behavior. Other studies have found that economic pressures, such as parents needing
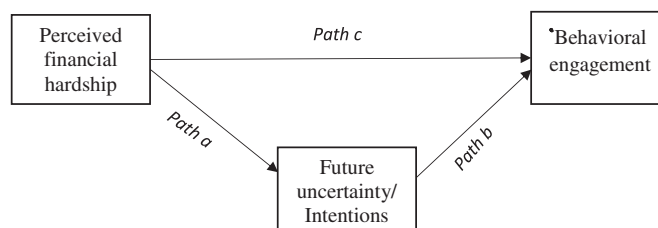

Fig. 1. Conceptual model of hypothesized relationships.

to spend more time at work, tend to generate distress and disruptions in family processes, which in turn affects children's academic engagement and commitment (Chaplin, Hill, & John, 2014; Dalton, Ghosal, & Mani, 2016; Guo, Sun, Breit-Smith, Morrison, & Connor, 2014). These studies converge in showing that the relationship of household economic conditions to educational outcomes can be indirect, notably through the mediating role of personal or household factors. Yet, while available evidence links household financial constraints to student educational outcomes in general, empirical gaps exist in how perceived family economic hardship is indirectly related to student classroom engagement. Existing studies are not explicit about the intervening role of psychological factors such as adolescents' future intentions and outlook, more so in resource-limited countries.

5.2. The unmediated pathway

Besides the mediated pathway from perceived family economic hardship to engagement, we postulate that such perceptions (i.e., the primary stimulus) can have a direct positive relationship with behavioral engagement, particularly when the adolescent classifies the stimulus as *specific*, *unstable*, and *internal attribution*. Perceived economic hardship may not lead to learned helplessness if: (a) adolescents believe it is not always the case that people fail to progress because of family economic hardship (*unstable attribution*); (b) when adolescents are not acutely aware of their actual financial situation or how financial challenges have prevented others from progressing educationally (*specific attribution*); or (c) when adolescents believe despite what they perceive as their family economic situation they can progress to higher education if they have good academic grades (*internal attribution*). In other words, some adolescents may persevere notwithstanding their perceptions about current economic circumstances. For instance, when an adolescent has clear goals towards gaining a college education, he or she would invest more in the learning process (Locke & Latham, 2002; Moeller, Theiler, & Wu, 2012; Morisano, Hirsh, Peterson, Pihl, & Shore, 2010).

The unmediated pathway, as illustrated by *path c* in Fig. 1, suggests a direct link from perceived family economic hardship to engagement. This direct connection reflects the notion that some students find ways to persevere, notwithstanding their perceptions of family financial hardships. Research by Ryan and Deci (2000) suggests that for some adolescents, the extrinsic motivation to break the poverty cycle of their families might push them to work harder in school, regardless of their households' financial situation. Dweck (2006) concurs by explaining that adolescents with a fixed mindset may blame their disengaged behavior on their families' financial challenges while the those with a growth mindset are more likely to perceive their households' financial situation as an opportunity to persevere and overcome. We, therefore, infer that perceived family economic hardship can directly shape student engagement.

From the above conceptualization and evidence from a handful of research studies, it is possible that perceptions of family economic hardship have a positive influence by motivating some students to work hard to break the intergenerational poverty cycle, or an adverse influence by demoralizing others to give up on their educational future. Using data from Ghana, the current study seeks to confirm these different pathways for adolescents in the sub-Saharan African context. Given the sustained economic deprivation that many young people experience in resource-limited countries, it is important to understand

empirically how their perceptions of such financial difficulties are related to their engagement. Such insight would be useful for designing programs that promote educational resilience among young people.

6. Methods

6.1. Data source

Data for the study come from a 2014 pilot project in Ghana that aimed at testing the impact of different financial assistance mechanisms on the learning outcomes of low-income youth in both rural and urban areas. A multistage sampling approach was used to select the sample for the study. First, the Greater Accra Region was randomly selected out of Ghana's 10 administrative regions for the study. The 16 districts, metropolis, and municipalities in the region were clustered into urban (metropolis and municipalities) and rural clusters. The Dangme West District (now named Shai-Osudoku District) was randomly selected from the rural cluster and Ashaiman district from the urban cluster. One public junior high school was selected from Ashaiman. Two schools were selected from Dangme West because of the significant interest in the economics of education in rural settings. All final year students in each of the three selected schools were approached to participate in the study. Out of the 150 recruitment target, 135 agreed to participate in the study and provided valid responses to the questions used in the current study. The Institutional Review Board at the University of North Carolina at Chapel Hill and district offices of the Ghana Education Service reviewed and approved procedures for the project. All students above the age of 18 consented to participate in the project, while a parent or guardian provided permission for students below the age of 18.

The Ashaiman District is home to one of the largest slum areas in Ghana with significant representation of low-income urban youth. Per the 2010 Population and Housing Census, the youth constitute a third of the district's 190,972 population, with a sex ratio of 94.1, and an average household size of 3.7 persons. The district's primary occupations include agricultural workers (forestry and fishery), service and sales workers, and craft and related trade (Ghana Statistical Service, 2014b). Dangme West, on the other hand, is a smaller district with a population of 50,021, although the district is as youthful as the Ashaiman District. Dangme West has an average household size of 4.4 persons, and a sex ratio of 94.1. The primary occupations are agriculture (crop/livestock farming, and fisheries), trading, and quarry jobs (Ghana Statistical Service, 2014c).

6.2. Measures

6.2.1. Outcome measure

Behavioral engagement was the outcome measure for the study. The construct measured students' behavioral involvement and participation in the classroom at post-test. Students were asked to indicate the extent to which they work hard on school work, participate in class discussions, pay attention in class, and listen very carefully in class. The importance of these behavioral issues to the Ghanaian education system is reflected in the fact that teachers are expected to comment on these aspects of student behavior on students' end-of-term report cards. In the current study, we used students' self-report of their behavior. The four-item scale used a 5-point response option namely: never (1), rarely (2), sometimes (3), often (4), and always (5). See Table 1 for the behavioral engagement items. The scale was originally developed by Skinner, Kindermann, & Furrer (2009). In a forerunner study, the authors applied the scale to data from Ghana and was found to have good psychometric properties (Ansong et al., 2017).

6.2.2. Independent variable

The main exogenous construct, *perceived family economic hardship*, consisted of eight items which tapped the perceived financial difficulties of the household (Nyarko, 2011). The family economic hardship scale was originally developed in 1994 by Conger, Elder, Lorenz, and Simons. Nyarko (2011) adapted the scale to the Ghanaian context. The 0.80 internal consistency reliability for the adapted scale (Nyarko,

Table 1
Observed variables for the behavioral engagement and financial hardship constructs.

Variables	
Engagement 1	In class, I work as hard as I can.
Engagement 2	When I'm in class, I participate in class discussions
Engagement 3	I pay attention in class.
Engagement 4	When I'm in class, I listen very carefully
Hardship 1	My parents are often worried whether they can pay their bills or not.
Hardship 2	We often run out of money.
Hardship 3	When I need materials for school, we sometimes don't have the money for them.
Hardship 4	I cannot do certain activities with my friends due to lack of money.
Hardship 5	I often have to give up things because my family has to restrict its expenses.
Hardship 6	My schoolmates have better clothes than I do.
Hardship 7	My peers usually have more money for activities than I do.
Hardship 8	I cannot afford buying as many things as my peers.

2011) meet the generally accepted standard. Students rated their families' current economic circumstances by indicating how often their families did not have enough money for family and school needs and how their financial circumstances compared to their peers. The items were rated on a 5-point response set of 1 = "never," 2 = "rarely," 3 = "sometimes," 4 = "often," and 5 = "always.". See Table 1 for the items for the perceived financial hardship constructs.

6.2.3. Hypothesized mediators and covariates

This study modeled two variables related to *future uncertainty* as mediators. Using an 11-point response scale ranging from 0 (strongly disagree) to 10 (strongly agree), respondents indicated their level of agreement with the statements (1) I feel certain that I will not graduate from junior high school, and (2) I don't plan to attend tertiary school after I graduate from senior high school. The items were originally developed in 2008 for the School Success Profile (SSP) project in the US (Bowen, Rose, & Bowen, 2005) and later adapted to the Ghanaian context in 2010 as part of the large-scale savings experiment called YouthSave Ghana Experiment (Chowa, Masa, Osei-Akoto et al., 2015; Chowa, Masa, Ramos et al., 2015). The YouthSave Ghana Experiment expanded the original 4-point response scale to an 11-point response scale to increase the response alternatives and improve variability, and thereby improve the scale reliability (Scherpenzeel & Saris, 1995).

Participants' age, gender, and *household size* were accounted for in all SEM models. *Participants' age* was a continuous variable measured in years. *Participants' gender* was a dichotomous measure coded as 1 = males and 0 = females. *Household size* was a continuous measure of the total number of people in each participants' household.

6.3. Analytical approach

This study used structural equation modeling (SEM) to examine the direct and indirect associations between family economic hardship and behavioral engagement in school. The study utilized Mplus 7 with the means and variance adjusted weighted least squares (WLSMV) estimation method. The choice of WLSMV is because of its ability to accommodate ordinal-level manifest variables and nonnormal data (Bowen & Guo, 2012; Muthen & Muthen, 2010). Per the practice in forerunner studies, the *cluster* option in Mplus was used to account for potential violation of the independence assumption because of the nesting of project participants in three separate junior high schools. We used the following four fit indices to evaluate the fit of all measurement and structural models: the χ^2/df ratio (good if > 1), root mean square error of approximation (RMSEA) (mediocre if 0.08 to 0.10, good if ≤ 0.05), comparative fit index (CFI) (acceptable if > 0.90, good if > 0.95) and Tucker-Lewis Index (TLI) (acceptable if > 0.95). Also, we considered factor loadings ≥ 0.30 adequate for the

Table 2
Means, standard deviations and correlation matrix for analysis sample.

	Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Engagement 1	4.444	1.004													
2	Engagement 2	4.188	1.025	0.474												
3	Engagement 3	4.414	1.031	0.472	0.417											
4	Engagement 4	4.256	0.966	0.261	0.462	0.484										
5	Hardship 1	3.314	1.278	0.133	0.097	0.034	0.063									
6	Hardship 2	3.158	0.935	0.039	0.175	0.056	0.115	0.188								
7	Hardship 3	3.083	0.945	0.138	0.104	0.025	− 0.065	0.411	0.250							
8	Hardship 4	3.430	1.244	0.160	0.245	0.023	0.132	0.492	0.391	0.543						
9	Hardship 5	3.361	1.148	0.249	0.259	0.219	0.254	0.426	0.416	0.515	0.602					
10	Hardship 6	2.380	1.416	0.070	0.233	0.039	0.131	0.460	0.404	0.400	0.546	0.444				
11	Hardship 7	3.628	1.239	0.104	0.177	0.096	0.228	0.512	0.402	0.384	0.630	0.554	0.551			
12	Hardship 8	3.483	1.092	0.128	0.204	0.064	0.098	0.392	0.361	0.525	0.642	0.649	0.503	0.646		
13	JHS uncertainty	2.521	3.215	− 0.070	− 0.151	− 0.096	− 0.174	0.064	− 0.077	0.096	0.065	− 0.019	0.162	− 0.018	0.004	
14	Post-sec uncertainty	2.843	3.403	− 0.122	− 0.188	− 0.206	− 0.268	0.066	− 0.112	− 0.049	0.092	− 0.036	− 0.014	− 0.051	− 0.074	0.572

SD = standard deviation.

measurement models (Costello & Osborne, 2005; Glaser, 1999; Hu & Bentler, 1999; Kline, 2005).

As per best practices, we used Confirmatory Factor Analysis (CFA) to establish the adequacy of the measurement model before analyzing the structural portion of the model (Kline, 2005). The behavioral engagement latent variable was conceptualized as a uni-dimensional construct based on prior conceptualization and assessment by Skinner, Kindermann, & Furrer (2009). Four indicators were specified to load onto the behavioral engagement construct. The financial hardship construct was first modeled as uni-dimensional in line with Nyarko's original conceptualization. However, we conducted further analysis to explore whether the financial hardship items that referenced peer groups (items 6–8) differed from those that referenced actual material deprivation (items 1–5) regarding how they relate to engagement. The expectation was that actual material deprivation might strongly affect engagement because of the need to work, while the social exclusion aspect of financial hardship might have less of a relationship with studying and concentrating.

After testing and identifying the measurement model that had adequate fit, we assessed the hypothesized structural relationships. The first structural equation model addressed *Hypothesis 1* that adolescents' perception of their chances of completing junior high school will partially mediate the relationship between family economic hardship and engagement in school. The second structural equation model addressed *Hypothesis 2*, that pupil's perception of their chances of progressing to tertiary level education will partially mediate the relationship between family economic hardship and engagement in school. In all structural models, we first tested the direct effect and then tested the direct and indirect associations simultaneously to compare to the direct effect-only model to address the question of whether the mediation, if any, was full or partial mediation.

7. Results

7.1. Descriptive results

Overall, girls constituted majority of the sample (55%), but the gender distribution varied by school ($x^2 = 13.59, p < 0.01$). The average age was 16 years ($SD = 1.81$) and did not vary by school ($F = 1.65, p = 0.18$). Although the study participants were slightly older than the typical junior high school students in Ghana (i.e., 13–15 years), it is not uncommon for the average junior high school students in rural and deprived areas to be slightly older than their urban counterparts. The sample had a larger household size ($M = 6.48, SD = 3.15$) compared to the district-wide average household size. However, the sample household size did not vary by school ($F = 2.42, p = 0.07$).

Table 2 presents the means, standard deviations, and correlation matrix of the endogenous, exogenous, and the (hypothesized) mediating variables.

On average, respondents reported low levels of uncertainty about completing junior high school (mean, $M = 2.53, SD = 3.23$) regardless of their school (Kruskal-Wallis $x^2 = 3.19, p = 0.07$). Respondents also reported low levels of progression to tertiary level education ($M = 2.86, SD = 3.41$), but it did not vary by school (Kruskal-Wallis $x^2 = 6.77, p = 0.08$). Scores on all four behavioral engagement indicators were relatively high (M range = 4.19–4.44, SD range = 0.97–1.03) and none of them varied by school at the 0.05 significance level. The mean scores on all eight-perceived family economic hardship indicators were moderate to high (M range = 2.39–3.49, SD range = 0.94–1.42). All but one financial hardship indicator (item 4) did not vary by school type at the 0.05 significance level.

7.2. Measurement model

The measurement model with two latent variables (perceived family economic hardship and behavioral engagement) had a good fit with the data: $\chi^2 = 61.54$, $df = 53$, χ^2/df ratio = 1.16, RMSEA = 0.04 (90% CI = 0.00–0.07), CFI = 0.98, TLI = 0.98. The final measurement model had moderate to high factor loadings (Family economic hardship loadings: 0.53 to 0.84; behavioral engagement: 0.57 to 0.77). All factor loadings were statistically significant at the 0.001 significance level, and there were no cross-loading. The latent variables were allowed to correlate ($\beta = 0.49$, $p < 0.001$). The R^2 values ranged from 0.28 to 0.70 for the family economic hardship indicators and 0.32 to 59 for the behavioral indicators.

When the financial hardship scale was modeled as a two-factor measurement model, the model fit was mediocre ($\chi^2 = 28.09$, $df = 19$, χ^2/df ratio = 1.48, RMSEA = 0.07 (90% CI = 0.00–0.11), CFI = 0.99, TLI = 0.98.), although it was deemed acceptable. The factor loadings ranged from moderate to high (Actual material hardship: 0.52 to 0.79; social exclusion hardship: 0.74 to 0.85).

7.3. Structural equation models

7.3.1. Direct relationship

The direct effect of perceived family economic hardship on behavioral engagement had a good fit: $\chi^2 = 61.54$, $df = 53$, χ^2/df ratio = 1.16, RMSEA = 0.04 (90% CI = 0.00–0.07), CFI = 0.98, TLI = 0.98. As depicted in Fig. 2, results show that overall, perceived family economic hardship is significantly positively associated with behavioral engagement ($\beta = 0.49$, $SE = 0.07$, $p < 0.001$). When the financial hardship scale was split into a two-factor construct (actual material hardship and social exclusion hardship) and linked to engagement, the overall model fit the data well: $\chi^2 = 63.03$, $df = 51$, χ^2/df ratio = 1.16, RMSEA = 0.05 (90% CI = 0.00–0.08), CFI = 0.98, TLI = 0.97. Although the two direct paths to engagement were statistically nonsignificant, the direct path from actual material hardship was

Fig. 2. Overall measurement model.
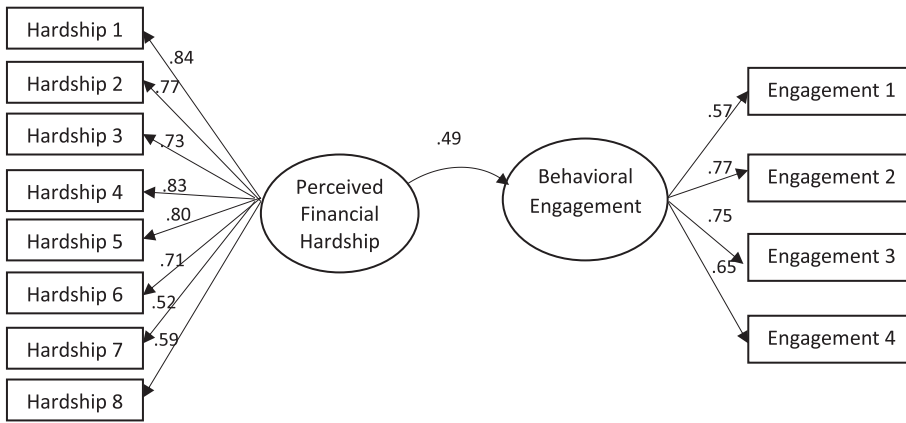
positive (β = 2.88, SE = 2.23, p = 0.19) and the path from social exclusion hardship was negative (β = − 2.41, SE = 2.35, p = 0.31).

7.3.2. Junior high school completion outlook

The first structural equation model which simultaneously tested the direct relationship between perceived family economic hardship and engagement, and the possible intervening role of uncertainty about junior high school completion exhibited good fit: χ^2 = 97.89, df = 82, χ^2/df ratio = 1.19, RMSEA = 0.04 (90% CI = 0.00–0.07), CFI = 0.97, TLI = 0.96. Fig. 3 presents the standardized solution for the model. Results show that pupils' perception of their families' economic circumstance is directly positively associated with their behavioral engagement (β = 0.63, SE = 0.03, p < 0.001).

Results also show that perceived family economic hardship is significantly positively associated with the level of uncertainty about junior high school completion (β = 0.28, SE = 0.02, p < 0.001) and uncertainty is, in turn, negatively associated with behavioral engagement (β = − 0.63, SE = 0.11, p < 0.001). This means the more pupils perceived their households' financial circumstances as harsh, the more they were uncertain about completing junior high school. Also, the more uncertain pupils were about their chances of completing junior high school, the worse they rated their behavioral engagement in class. The Sobel test for indirect effects confirms the mediation role of pupils' uncertainty about the future (i.e., indirect effect: β = − 0.17, SE = 0.02, p < 0.001). In this model, uncertainty about junior high school completion is an inconsistent mediator (suppressor) because the
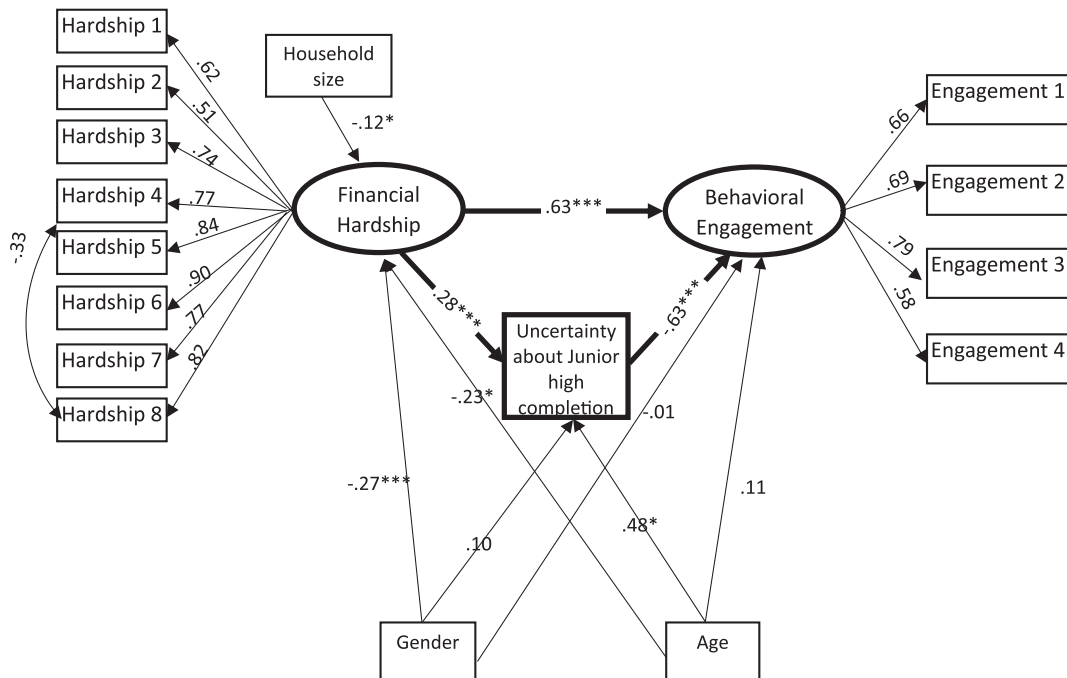

Fig. 3. Estimated standardized path coefficients for direct and indirect associations between perceived financial hardship and engagement in class; uncertainty about JHS completion as mediator.

direct and indirect pathways vary in two ways. First, the magnitude of the direct effect ($\beta = 0.63$) is greater than the indirect effect ($\beta = -0.17$). Secondly, the direct relationship is positive, but the indirect relationship is negative. The presence of uncertainty increases the magnitude of the direct relationship from 0.49 to 0.63. When it comes to the distinction between actual material hardship versus social exclusion hardship, we did not proceed with mediation analysis because the direct effects were not statistically significant.

7.3.3. Intention to progress to post-secondary education

The second model assessed the influence of perceived family economic hardship on behavioral engagement and the potential intervening role of pupils' postsecondary education intentions. The model had a good fit: $\chi^2 = 93.34$, $df = 82$, χ^2/df ratio = 1.14, RMSEA = 0.04 (90% CI = 0.00–0.07), CFI = 0.98, TLI = 0.97. As shown in Fig. 4, pupils' perception of their households' economic hardship was directly positively associated with their behavioral engagement ($\beta = 0.55$, $SE = 0.06$, $p < 0.001$).

Perceptions of family economic hardship were also significantly positively associated with the level of uncertainty about postsecondary education intentions ($\beta = 0.16$, $SE = 0.02$, $p < 0.001$). This means the more one perceived their household's financial situation as difficult, the more uncertain they were about their intention to progress to the postsecondary education level. Results also show that uncertainty was negatively associated with behavioral engagement ($\beta = -0.65$, $SE = 0.07$, $p < 0.001$), suggesting that, the more uncertain pupils were about their intentions for postsecondary education, the worse they rated their behavioral engagement. These two significant relationships combined is evidence of *inconsistent mediation* (suppression). The Sobel test for indirect effects confirmed the inconsistent mediation role of pupils' level of uncertainty about postsecondary education intentions ($\beta = -0.10$, $SE = 0.02$, $p < 0.001$). The direct and indirect pathways

differ by the magnitude and direction of the relationships. The magnitude of the direct effect ($\beta = 0.55$) is greater than the indirect effect ($\beta = -0.10$), and the direct relationship is positive while the indirect relationship is negative. The presence of uncertainty about postsecondary education increases the magnitude of the direct effect from 0.49 to 0.55.

Overall, evidence from the two structural equation models shows that perceptions of family economic hardship are positively associated with pupils' behavioral engagement in the classroom, although this relationship is suppressed (i.e., becomes more evident) by pupils' uncertainty about their chances of completing junior high school or intentions to progress to postsecondary education level.

Given the small size of the analytic sample, we conducted a post hoc Monte Carlo simulation to assess the adequacy of the statistical power. Following Muthén and Muthén's (2002) recommendation, we used the following statistics to assess the quality of the results from the Monte Carlo simulation: coverage, relative parameter bias, and relative standard effort bias. The Monte Carlo simulation results show that the values for the relative parameter bias (-0.009 to 0.012) and the relative standard error bias (-0.007 to 0.029) were below the upper limit of $\leq |0.10|$. Moreover, the relative standard error bias for all the major parameters of interest (hardship → engagement, 0.029; hardship → uncertainty, -0.012; and hardship → uncertainty, -0.016) were below the recommended absolute upper limit of ≤ 0.05. Also, the coverage values (0.934 to 0.954) were within the specified values between 0.91 and 0.98. Power was ≥ 0.90 for all the paths, except the path from family economic hardship to uncertainty which was 0.54. These results indicate that overall, the analytic sample of 135 has sufficient statistical power, except the path from family economic hardship to uncertainty, which is underpowered. For that reason, we caution that results of this study should be extrapolated with caution.
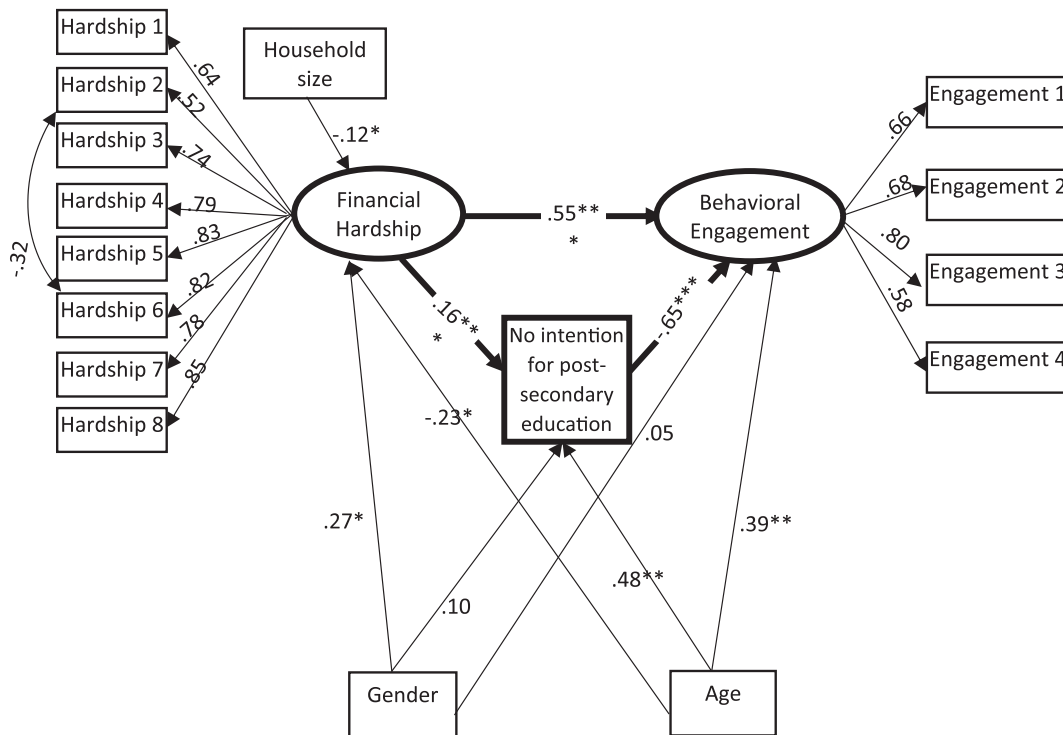

Fig. 4. Estimated standardized path coefficients for direct and indirect associations between perceived financial hardship and engagement in class; uncertainty about postsecondary education as mediator.

8. Discussion

The results of the two SEM models tested in this study support the hypothesized direct influence of perceived family economic hardship on behavioral engagement as well as the indirect influence through the intervening role of future intentions and outlook. The present study found that perceived family economic hardship is consistently related to behavioral engagement in school, both directly and indirectly. These results, coming from a different geographical region, add to the external validity of findings in previous research that suggests potential links between family economic hardship and students' behavioral engagement (Chaplin et al., 2014; Dalton et al., 2016; Guo et al., 2014). The finding that perceived family economic hardship influences student behavioral engagement both directly and indirectly reflects the fact that family economic hardship consistently matters to students' level of engagement in schoolwork. This finding underscores the importance of financial resources in understanding the educational well-being of adolescents. Therefore, it is suggested that any policy efforts or interventions to address student behavioral problems should not overlook the possible influences of the students' perceptions of their families' financial circumstances.

Our results also suggest that the role of perceived family economic hardship in student participation and involvement can be either positive or negative. Although not statistically significant, it seems perceived financial hardship could hinder school engagement when students compare themselves to their peers, but then facilitate school engagement when the perceived financial hardship is based on actual material deprivation. These different pathways are consistent with the theory of learned helplessness that suggests that perceived conditions can facilitate or hinder behavior depending on whether people classify the conditions as either internal or external, global or specific, and stable or unstable (Zimmerman, 1990). The mechanisms by which individuals attribute their future success to their current financial circumstances may explain the facilitation and mitigation role of perceived financial hardship. To further understand the distinct pathways through which perceived family economic hardship influences students' behavioral engagement, further research should focus on how the above dual relationships apply to other African countries and educational levels. Further research should also focus on how the distinction between perceptions of actual material hardship and social exclusion could explain individual educational outcomes.

Evidence from our data also suggests that perceptions of family economic hardship have a positive unmediated relationship with behavior engagement. Although it may seem contrary to conventional thoughts, this direct path suggests that as young people become more concerned about their personal and family finances, some might decide to work harder in school to become successful in the future. In such situations, perceived family economic hardship has an unintended motivational influence on students' behavior. As adolescents ponder over household resources for school needs (i.e., external stimuli), their internal stimuli (e.g., the desire for higher education) may overshadow their perceptions of financial hardship. If a student does not perceive his or her current financial situation as the primary or most significant factor in determining their chances of academic progression, then financial difficulties might not be a major hindrance to positive behavior. Such a student might decide to study harder to make good grades to earn a scholarship for higher education.

On the other hand, the inconsistent mediated pathway (suppression) suggests that perceptions of financial difficulties can have a negative influence on students' behavior, but it is only possible when one considers the hardship-engagement relationship in the context of students' perceptions and intentions about the future. In other words, the suppression role of students' orientation towards the future is such that it can amplify the adverse effect of hardship. When people have financial challenges, they may become less hopeful about the future, and when that happens, they may not commit as much effort into their work

(Garcia-Reid, 2007). In other words, concerns about financial challenges might weigh heavily on a student, especially if he/she inclined to perceive the financial burden of future education as insurmountable. Such students might not see the need to increase their efforts in school because they feel their efforts will not be enough to succeed academically. This finding has implications for educators on the kind of psychological empowerment young people need to enable them to see future possibilities and be resilient in their educational pursuit. Social workers and community development workers and teachers would benefit from the awareness that students with no positive academic goals are more susceptible to learned helplessness. When such adolescents come from financially strained households, they may benefit from integrated programs that include financial aid and scholarships because they may believe that access to future educational opportunities is financially out of reach and beyond their control. Such integrated programs might improve the motivation and resilience to learn and engage in schoolwork. Lack of motivation results in abysmal school attendance, failure to complete homework, and passive participation in the learning (Pintrich, 2003). Consequently, the students feel helpless, and finds no reason to continue attending school, thus opting to drop out of school (Garcia-Reid, 2007; Ulusoy & Duy, 2013).

The overall finding of different pathways raises important questions for future research about the possibility of a perceived family economic hardship threshold that determines whether family economic hardship might lead to motivational or demoralizing effects on student behavior. From a social work practice perspective, it seems if the current trend of rising cost of higher education in low-income countries continues, there is a greater chance that many low-income students would give up their dreams for higher education. In many resource-limited countries where the cost of secondary and higher education is relatively high, poor students who cannot afford current and future education expenses might have to divide their time between working for economic gain and spending more time on their academic tasks (Garcia-Reid, 2007; Alhassan et al., 2017).

8.1. Limitations and strengths

This study has limitations regarding the generalizability of findings. The pilot study obtained the sample from one out of the 10 geographically and ethnically diverse regions of Ghana, hence the sample may not be representative of other low-income communities in Ghana and beyond Ghana. Also, because of limited data and to keep the SEM models parsimonious, we may have increased the risk of incorrectly leaving out essential determinants of student engagement (i.e., omitted variable bias). The study controlled for three covariates and also modeled the nested structure of the data to mitigate this risk. Nonetheless, results of the study must be interpreted with caution. Notwithstanding these limitations, this study has yielded valuable findings. Although researchers have increasingly become interested in examining the nature and effects of student engagement in sub-Saharan Africa, few studies from developing countries have used multi-item scales to conduct a comprehensive investigation of the influence of perceived family economic hardship on behavioral outcomes. The current study offers insights into how future larger studies could address the empirical gaps in the literature by utilizing multi-item constructs to measure perceived financial hardships and behavioral engagement. Based on lessons from prior studies that fail to highlight the nuances of the relationships (i.e., the constructs can sometimes be directly and indirectly related), the current study modeled not only the existence of a relationship between variables and constructs but also explored some of the nuanced pathways through which these constructs connect.

9. Conclusion

This study drew on the theory of learned helplessness and data from

Ghana to understand more precisely, how perceived family economic hardship relates to student engagement directly or indirectly through the role of future education intentions and outlook. Although family economic hardship, in general, may put a strain on families' ability to afford educational expenses, our results suggest that it is how young people perceive their families' economic hardship that determines whether they will feel helpless and give up or persevere. This empirical effort to understand the nuanced connection between perceived family economic hardship and student engagement is important as it informs future studies and the subsequent development of effective school-based interventions aimed at increasing students' resilience and school, particularly those from low-income households.

Disclosure of potential conflicts of interest

On behalf of myself and my coauthors, I certify that we have no affiliations with or involvement in any organization or entity with any financial or non-financial interests in the subject matter or materials discussed in this manuscript.

Compliance with ethical standards

The data for this paper were drawn from a project supported by a research grant from the Armfield-Reeves Innovation Fund at the University of North Carolina-Chapel Hill, School of Social Work.

Ethical approval statement

The study protocols were reviewed and approved by the Institutional Review Board of the University of North Carolina at Chapel Hill (IRB Study # 14-1475).

References

Addai, I., Opoku-Agyeman, C., & Amanfu, S. K. (2014). Exploring predictors of subjective well-being in Ghana: A micro-level study. *Journal of Happiness Studies, 15*, 869–890. http://dx.doi.org/10.1007/s10902-013-9454-7.

Addai, I., & Pokimica, J. (2010). Ethnicity and economic well-being: The case of Ghana. *Social Indicators Research, 99*(3), 487–510.

Alhassan, M., Ansong, D., Ampomah, A. O., & Albritton, T. J. (2017). Junior high school students' use of their afterschool hours in Ghana: The role of household assets. *Child & Youth Services, 38*(3), 231–251.

Al Hazzouri, A. Z., Elfassy, T., Sidney, S., Jacobs, D., & Yaffe, K. (2017). Sustained economic hardship and cognitive function: The coronary artery risk development in young adults study. *American Journal of Preventive Medicine, 52*(1), 1–9.

Ansong, D., Okumu, M., Bowen, G. L., Walker, A. M., & Eisensmith, S. R. (2017). The role of parent, classmate, and teacher support in student engagement: Evidence from Ghana. *International Journal of Educational Development, 54*, 51–58. http://dx.doi.org/10.1016/j.ijedudev.2017.03.010.

Ansong, D., Wu, S., & Chowa, G. A. N. (2015). The role of child and parent savings in promoting expectations for university education among middle school students in Ghana: A propensity score analysis. *Children and Youth Services Review, 58*, 265–273. http://dx.doi.org/10.1016/j.childyouth.2015.08.009.

Appleton, J. (2011). Student engagement. In R. J. R. Levesque (Ed.). *Encyclopedia of adolescence* (pp. 2896–2904). New York: Springer.

Archambault, I., Janosz, M., Fallu, J.-S., & Pagani, L. S. (2009). Student engagement and its relationship with early high school dropout. *Journal of Adolescence, 32*(3), 651–670. http://dx.doi.org/10.1016/j.adolescence.2008.06.007.

Arku, F. S., Filson, G. C., & Shute, J. (2008). An empirical approach to the study of well-being among rural men and women in Ghana. *Social Indicators Research, 88*, 365–387.

Bowen, G. L., Rose, R. A., & Bowen, N. K. (2005). *The reliability and validity of the School Success Profile.* Philadelphia, PA: Xlibris Press.

Bowen, N. K., & Guo, S. (2012). *Structural equation modeling.* New York, NY: Oxford University Press.

Bradley, S. E., Sherwood, P. R., Kuo, J., Kammerer, C. M., Gettig, E. A., Ren, D., ... Given, B. (2009). Perceptions of economic hardship and emotional health in a pilot sample of family caregivers. *Journal of Neuro-Oncology, 93*(3), 333–342. http://dx.doi.org/10.1007/s11060-008-9778-z.

Carini, R. M., Kuh, G. D., & Klein, S. P. (2006). Student engagement and student learning: Testing the linkages. *Research in Higher Education, 47*(1), 1–32. http://dx.doi.org/10.1007/s11162-005-8150-9.

Chaplin, L. N., Hill, R. P., & John, D. R. (2014). Poverty and materialism: A look at impoverished versus affluent children. *Journal of Public Policy & Marketing, 33*(1), 78–92. http://dx.doi.org/10.1509/jppm.13.050.

Cheung, G. W., & Lau, R. S. (2008). Testing mediation and suppression effects of latent variables: Bootstrapping with structural equation models. *Organizational Research Methods, 11*(2), 296–325. http://dx.doi.org/10.1177/1094428107300343.

Chowa, G., Masa, R., Osei-Akoto, I., Ansong, D., Despard, M., Afranie, S., ... Sherraden, M. (2015). *Impacts of financial inclusion on youth development: Findings from the Ghana YouthSave experiment (CSD Research Report 15–35).* St. Louis, MO: Washington University, Center for Social Development.

Chowa, G. A. N., Masa, R. D., Ramos, Y., & Ansong, D. (2015). How do student and school characteristics influence youth academic achievement in Ghana? A hierarchical linear modeling of Ghana YouthSave baseline data. *International Journal of Educational Development, 45*, 129–140. http://dx.doi.org/10.1016/j.ijedudev.2015.09.009.

Christenson, S. L., Reschly, A. L., & Wylie, C. (Eds.). (2012). *The handbook of research on student engagement.* New York, NY: Springer Science.

Conger, K. J., Martin, M. J., Reeb, B. T., Little, W. M., Craine, J. L., Shebloski, B., & Conger, R. D. (2012). Economic hardship and its consequences across generations. In V. Maholmes, & R. B. King (Eds.). *Oxford handbook of child development and poverty* (pp. 37–53). New York: Oxford University Press. http://dx.doi.org/10.1093/oxfordhb/9780199769100.013.0002.

Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment Research & Evaluation, 10*, 1–9.

Cracolici, M. F., Giambona, F., & Cuffaro, M. (2012). The determinants of subjective economic well-being: An analysis on Italian-Silc data. *Applied Research Quality Life, 7*, 17–47. http://dx.doi.org/10.1007/s11482-011-9140-z.

Dalton, P. S., Ghosal, S., & Mani, A. (2016). Poverty and aspirations failure. *The Economic Journal, 126*(590), 165–188. http://dx.doi.org/10.1111/ecoj.12210.

De Haan, L. G., & MacDermid, S. M. (1999). Identity development as a mediating factor between urban poverty and behavioral outcomes for junior high school students. *Journal of Family and Economic Issues, 20*(2), 123–148.

Demanet, J., Van Praag, L., & Van Houtte, M. (2015). The intersection between congruence and diversity in schools: Implications for fitting in. *Annual meeting of the American Educational Research Association (AERA): Toward, Justice, Culture, Language and Heritage in Education Research and Praxis.*

Donnellan, M. B., Conger, K. J., McAdams, K. K., & Neppl, T. K. (2009). Personal characteristics and resilience to economic hardship and its consequences: Conceptual issues and empirical illustrations. *Journal of Personality, 77*(6), 1645–1676. http://dx.doi.org/10.1111/j.1467-6494.2009.00596.x.

Duncan, G. J., Brooks-Gunn, J., & Klebanov, P. K. (1994). Economic deprivation and early childhood development. *Child Development, 65*(2), 296–318. http://dx.doi.org/10.1111/j.1467-8624.1994.tb00752.x.

Dweck, C. S. (2006). *Mindset: The new psychology of success.* New York: Random House.

Fredricks, Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59–109. http://dx.doi.org/10.1016/j.adolescence.2008.06.007.

Garcia-Reid, P. (2007). Examining social capital as a mechanism for improving school engagement among low income Hispanic girls. *Youth Society, 39*(2), 164–181. http://dx.doi.org/10.1177/0044118X07303263.

Ghana Statistical Service (2014a). Ghana living standards survey round 6 (GLSS6): Poverty profile in Ghana (2005–2013). Retrieved from http://www.statsghana.gov.gh/docfiles/glss6/GLSS6_Poverty%20Profile%20in%20Ghana.pdf.

Ghana Statistical Service (2014b). *2010 population and housing census district analytical report: Ashaiman municipality.* Accra, Ghana: Ghana Statistical Service.

Ghana Statistical Service (2014c). *2010 population and housing census district analytical report: Shai Osudoku district.* Accra, Ghana: Ghana Statistical Service.

Glaser, D. N. (1999). The controversy of significance testing: Misconceptions and alternatives. *American Journal of Critical Care, 8*(5), 291–296. Retrieved from http://ajcc.aacnjournals.org.

Guo, Y., Sun, S., Breit-Smith, A., Morrison, F. J., & Connor, C. M. (2014). Behavioral engagement and reading achievement in elementary-school-age children: A longitudinal cross-lagged analysis. *Journal of Educational Psychology, 107*(2), 332–347.

Ho, C. S., Lempers, J. D., & Clark-Lempers, D. S. (1995). Effects of economic hardship on adolescent self-esteem: A family mediation model. *Adolescence, 30*(117), Retrieved from http://www.mendeley.com/research/effects-economic-hardship-adolescent-selfesteem-family-mediation-model/.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Model, 6*, 1–55. http://dx.doi.org/10.1080/10705519909540118.

Human Rights Watch (2017). *I Had a Dream to Finish School' Barriers to Secondary Education in Tanzania.* https://www.hrw.org/sites/default/files/report_pdf/tanzania0217_web.pdf.

Jang, H., Kim, E. J., & Reeve, J. (2012). Longitudinal test of self-determination theory's motivation mediation model in a naturally occurring classroom context. *Journal of Educational Psychology, 104*(4), 1175. http://dx.doi.org/10.1037/a0028089.

Jariah, M., Husniyah, A. R., Laily, P., & Britt, S. (2004). Financial behavior and problems among university students: Need for financial education. *Journal of Personal Finance, 3*(1), 82–96.

Kelly, S. (2008). Race, social class, and student engagement in middle school English classrooms. *Social Science Research, 37*(2), 434–448. http://dx.doi.org/10.1016/j.ssresearch.2007.08.003.

Kiely, K., Leach, L., Olesen, S., & Butterworth, P. (2015). How financial hardship is associated with the onset of mental health problems over time. *Social Psychiatry and Psychiatric Epidemiology, 1*–10. http://dx.doi.org/10.1007/s00127-015-1027-0.

Kline, T. (2005). *Psychological testing: A practical approach to design and evaluation.* Thousand Oaks, CA: Sage Publications, Inc.

Krauss, A. (2013). *Understanding child labor in Ghana beyond poverty: The structure of the economy, social norms, and no returns to rural basic education.* Washington, DC: World

Bank.

Lee, Y. S., & Jonson-Reid, M. (2016). The role of self-efficacy in reading achievement of young children in urban schools. *Child and Adolescent Social Work Journal, 33*(1), 79–89. http://dx.doi.org/10.1007/s10560-015-0404-6.

Liem, G. A. D., & Martin, A. J. (2012). The Motivation and Engagement Scale: Theoretical framework, psychometric properties, and applied yields. *Australian Psychologist, 47*(1), 3–13. http://dx.doi.org/10.1111/j.1742-9544.2011.00049.x.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35year odyssey. *American Psychologist, 57,* 705–717.

Maier, S. F., & Seligman, M. E. (1976). Learned helplessness: Theory and evidence. *Journal of Experimental Psychology, 105*(1), 3–46. http://dx.doi.org/10.1037/0096-3445.105.1.3.

Martin, A. J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, and achievement: Yields for theory, current issues, and educational practice. *Review of Educational Research, 79*(1), 327–365. http://dx.doi.org/10.3102/0034654308325583.

Mistry, R. S., Vandewater, E. A., Huston, A. C., & McLoyd, V. C. (2002). Economic well-being and children's social adjustment: The role of family process in an ethnically diverse low-income sample. *Child Development, 73*(3), 935–951. http://dx.doi.org/10.1111/1467-8624.00448.

Moeller, A. J., Theiler, J., & Wu, C. (2012). Goal setting and student achievement: A longitudinal study. *Modern Language Journal, 96,* 153–169.

Morisano, D., Hirsh, J. B., Peterson, J. B., Pihl, R. O., & Shore, B. M. (2010). Setting, elaborating, and reflecting on personal goals improves academic performance. *Journal of Applied Psychology, 95*(2), 255264.

Muthén, L. K., & Muthén, B. O. (2002). How to use a Monte Carlo study to decide on sample size and determine power. *Structural Equation Modeling: A Multidisciplinary Journal, 9,* 599–620. http://dx.doi.org/10.1207/S15328007SEM0904_8.

Muthen, L. K., & Muthen, B. O. (2010). In L. Angeles (Ed.). *MPLUS user's guide*(6th ed.). CA: Muthen & Muthen.

Nam, J., & Ansong, D. (2015). The effects of a dedicated education savings account on children's college graduation. *Economics of Education Review, 48,* 198–207. http://dx.doi.org/10.1016/j.econedurev.2015.07.004.

Nyarko, K. (2011). Parental school involvement: The case of Ghana. *Journal of Emerging Trends in Educational Research and Policy Studies, 2*(5), 378–381.

O'Neal, C. W., Arnold, A. L., Lucier-Greer, M., Wickrama, K. A. S., & Bryant, C. M. (2015). Economic pressure and health and weight management behaviors in African American couples: A family stress perspective. *Journal of Health Psychology, 20*(5), 625–637.

Parish, S. L., Rose, R. A., Grinstein-Weiss, M., Richman, E. L., & Andrews, M. E. (2008). Material hardship in U.S. families raising children with disabilities. *Exceptional Children, 75*(1), 71–92. http://dx.doi.org/10.1177/001440290807500104.

Pintrich, P. R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology, 95*(4), 667–686.

Pokimica, J., Addai, I., & Takyi, B. (2012). Religion and subjective well-being in Ghana. *Social Indicators Research, 106*(1), 61–79.

Pradhan, M., & Ravallion, M. (2000). Measuring poverty using qualitative perceptions of consumption adequacy. *The Review of Economics and Statistics, 82*(3), 462–471.

Pridmore, P., & Jere, C. (2011). Disrupting patterns of educational inequality and disadvantage in Malawi. *Compare: A Journal of Comparative and International Education, 41*(4), 513–531. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ929417&site=ehost-live.

Puff, J., & Renk, K. (2014). Relationships among parents' economic stress, parenting, and young children's behavior problems. *Child Psychiatry and Human Development, 45*(6), 712–727. http://dx.doi.org/10.1007/s10578-014-0440-z.

Republic of Ghana & United Nations (2015). *Ghana Millennium Development goals: 2015 report.* UNDPhttp://www.gh.undp.org/content/ghana/en/home/library/poverty/2015-ghana-millennium-development-goals-report.html.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*(1), 54–67. http://dx.doi.org/10.1006/ceps.1999.1020.

Scherpenzeel, A. C., & Saris, W. E. (1995). The quality of indicators of satisfaction across Europe: A meta-analysis of multitrait-multimethod studies. In A. C. Scherpenzeel (Ed.). *Question of Quality. Evaluating survey questions by multitrait-multimethod studies*Royal PTT Nederland NV, KPN Research (Dissertation).

Shah, A. K., Mullainathan, S., & Shafir, E. (2012). Some consequences of having too little. *Science, 338,* 682–685. http://dx.doi.org/10.1126/science.1222426.

Shernoff, D. J. (2013). *Optimal learning environments to promote student engagement.* New York: Springer.

Skinner, E. A., Kindermann, T. A., Connell, J. P., & Wellborn, J. G. (2009). Engagement and disaffection as organizational constructs in the dynamics of motivational development. In K. Wentzel, & A. Wigfield (Eds.). *Handbook of motivation in school.* Malwah, NJ: Erlbaum.

Skinner, E. A., Kindermann, T. A., & Furrer, C. (2009). A motivational perspective on engagement and disaffection: Conceptualization and assessment of children's behavioral and emotional participation in academic activities in the classroom. *Educational and Psychological Measurement, 69,* 493–525.

Tsai, M., & Dzorgbo, D. S. (2012). Familial reciprocity and subjective well-being in Ghana. *Journal of Marriage and Family, 74*(1), 215–228.

Ulusoy, Y., & Duy, B. (2013). Effectiveness of a psycho-education program on learned helplessness and irrational beliefs. *Educational Sciences: Theory and Practice, 13*(3), 1440–1446.

Urdan, T., & Schoenfelder, E. (2006). Classroom effects on student motivation: Goal structures, social relationships, and competence beliefs. *Journal of School Psychology, 44*(5), 331–349. http://dx.doi.org/10.1016/j.jsp.2006.04.003.

Valås, H. (2001). Learned helplessness and psychological adjustment: Effects of age, gender and academic achievement. *Scandinavian Journal of Educational Research, 45*(1), 71–90. http://dx.doi.org/10.1080/00313830020042689.

Van Ryzin, M. J., Gravely, A. A., & Roseth, C. J. (2009). Autonomy, belongingness, and engagement in school as contributors to adolescent psychological well-being. *Journal of Youth and Adolescence, 38*(1), 1–12. http://dx.doi.org/10.1007/s10964-007-9257-4.

Wadsworth, M. E., Rindlaub, L., Hurwich-Reiss, E., Rienks, S., Bianco, H., & Markman, H. J. (2013). A longitudinal examination of the adaptation to poverty-related stress model: Predicting child and adolescent adjustment over time. *Journal of Clinical Child and Adolescent Psychology, 42*(5), 713–725. http://dx.doi.org/10.1080/15374416.2012.755926.

Weiner, B. (2012). An attribution theory of motivation. In P. A. Van Lange, A. W. Kruglanski, & E. T. Higgins (Vol. Eds.), *Handbook of theories of social psychology. vol. 1. Handbook of theories of social psychology* (pp. 135–155). London: SAGE Publications Ltd. http://dx.doi.org/10.4135/9781446249215.n8.

Wentzel, K. R., Battle, A., Russell, S. L., & Looney, L. B. (2010). Social supports from teachers and peers as predictors of academic and social motivation. *Contemporary Educational Psychology, 35*(3), 193–202. http://dx.doi.org/10.1016/j.cedpsych.2010.03.002.

Woldehanna, T., & Hagos, A. (2015). Economic shocks and children's drop out from primary school: Implications for education policy in Ethiopia. *Africa Education Review, 12*(1), 28–47. http://dx.doi.org/10.1080/18146627.2015.1036548.

Yates, S. (2009). Teacher identification of student learned helplessness in mathematics. *Mathematics Education Research Journal, 21*(3), 86–106. http://dx.doi.org/10.1007/BF03217554.

Zimmerman, M. A. (1990). Toward a theory of learned hopefulness: A structural model analysis of participation and empowerment. *Journal of Research in Personality, 24,* 71–86.