A Hierarchical Linear Modelling Analysis of Ecological Predictors of Academic Achievement of Refugee Students in Kenya

by

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Abstract

Refugee children experience significant challenges in their schooling that can lead to poor performance and dropping out of school. To date, no study has examined what factors predict academic achievement of refugee youth in schools in low-income countries that host most of the world's refugee students. The current study was conducted in primary (Grades 7 and 8; n = 400 students, 400 parents/guardians, 80 teachers, 20 schools) and secondary (Forms 1 and 2; n = 400 students, 400 parents/guardians, 80 teachers, 20 schools) schools in Kenya and examined individual, family, teacher, and school factors that may predict refugee students' academic achievement. Predictor variables included measured variables (student self-efficacy, parental involvement, teacher expectations, and teachers' self-efficacy) and status variables (student age, gender, and grade level; parent age, gender, level of education, family type, and housing status; teacher age, gender, qualifications, and experiences; and school location). A three-level hierarchical linear model (students nested within classes nested within schools) was used to analyze the data for primary schools and a two-level hierarchical linear model (students nested within schools) was used to analyze the data for secondary schools. The results showed that student self-efficacy, parental involvement, and teacher expectations were positively associated with students' GPA both in primary and secondary schools, and teachers' self-efficacy predicted primary school students' GPA. Some status variables, such as family type and grade level predicted primary school students' GPA, and parents' level of education predicted secondary school students' GPA. The age of the students, parents, or teachers, as well as teachers' gender and qualifications had no significant association with students' GPA in the final models. Implications for practice and suggestions for future research are provided.

Preface

This dissertation is an original work by Jane Namubuya Khaemba. The research project, of which this dissertation is a part, received research ethics approval from the University of Alberta Research Ethics Board, "Academic Achievement of Refugee Children." No. 0002764512345, January 10, 2012.

Dedication

First and foremost, this work is dedicated to the Almighty God, with whom all things are possible. Thank you Lord for your Mighty Hand that has aided me in accomplishing my dream. Second, this work is dedicated to my lovely parents Daniel and Rachael, who sacrificed many things to aid me in this accomplishment. Dad, thank you for creating an academic oriented family and environment for success. Thank you for believing in me - that I would one day become a Queen; a Queen in academics, and so I am. I am so glad I reached where you wanted me to reach and I am sure you are more proud of me than ever. Thank you mum for taking care of me in every way. Thank you for being there for me at all times. Even distance could not keep you from watching over me and ensuring that I was safe at all times. Thank you for dedicating your life to pray for me fervently especially from the time I began this program to the end. I thank the Almighty God for giving me such a caring mum like you. Mum, you prayed and believed that God was going to see me through and indeed God helped me through the entire process, all praise and glory be to the Almighty God. Third, this work is dedicated to my sisters Mary and Aquilla for standing with me and praying for me especially that week prior to my final defense. I love you dear sisters and I thank God for giving me such sisters like you. Lastly, this work is dedicated to my lovely brothers Christopher, Patrick, and David. Chris, thank you for your financial support and for believing in me. Patty, thank you for making sure that I stayed in school. You always believed that I was capable of achieving the best, and so I did. Dave, thank you for all your input in my accomplishments. It is so sad that the sting of death through that accident could neither let you see me accomplish this important academic journey nor even let you attend my graduation, but I feel you in my spirit and see your image through your smiles.

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The work represented here is a reflection of compiled life events, forces, and exchanges that have shaped my growth and development as a learner and contributor to the planet around us. Innumerable people and events, past and present, have contributed immensely to my success. To those not mentioned here, thank you all.

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Chapter 1

Introduction

1.1. Background

The United Nations High Commissioner for Refugees (UNHCR) defines refugees as persons who, owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, are living outside the country of their nationality. Refugees are unable or, owing to such fear, unwilling to avail themselves of the protection of that country, or who, because of not having a nationality and being outside the country of their former habitual residence as a result of such events, are unable or unwilling to return to it (UNHCR, 2010).

Refugees are sometimes referred to as immigrants. However, there are differences between refugees and immigrants. Unlike immigrants who voluntarily move to settle in other countries, refugees are usually forced to flee their home countries due to unavoidable circumstances (Delgado, Jones, & Rohani, 2005), likely will live in refugee camps for years before they can resettle to whichever country accepts them (Cassity, 2005; Hones & Cha, 1999; Tollefson, 1989), and generally do not have a voice in determining their destination (UNHCR, 2000). Refugees who are admitted in host countries have other limitations. For example, whereas immigrants enter their host countries by obtaining entrance visas that allow them re-entry to their host countries should they leave for a specified amount of time, the type of visa available to refugees in many contexts does not allow them to leave the host country's borders for a specified

amount of time (Kerwin, 2012).

As of 2009, the number of forcibly displaced people, including internally displaced people, was estimated to be 43.3 million of which about 16 million were refugees (UNHCR, 2010). While the number of refugees has decreased in some regions of the world, the number has increased in other regions. For example, the UNHCR (2010) report noted a decrease in the number of refugees from the Middle East and Northern part of Africa and an increase in the number of refugees from Asia and Pacific countries. Currently, the Horn of Africa is one of the largest sources of refugees (UNCHR, 2010).

The United States, Canada, and Australia have a record of being the top developed countries that have accepted refugees (McBrien, 2011; UNHCR, 2010; Fantino & Colak, 2001). However, many low-income countries host more refugees than several high-income countries combined. For example, in 2006, Tanzania alone hosted more refugees than Canada, France, Australia, the United States, Germany, Spain, and Japan combined. In addition, while Syria, Chad, Kenya, Thailand, China, Iran, and Jordan each hosted more than 250,000 refugees in 2006, Canada hosted 43,500 refugees (United States Committee for Refugees and Immigrants (USCRI), 2007). Based on the USCRI 2009 survey, Canada hosted 72,000 refugees; Tanzania hosted 321,000 refugees, and Kenya hosted 377,400 refugees (USCRI, 2009). According to the report by UNCHR (2011), by the end of 2010, the number of refugees in Kenya increased to slightly over 400,000 that were mainly from Somalia (83%), Ethiopia (8%), Sudan (6%), the Democratic Republic of Congo (2%), as well as from Burundi, Eritrea, Rwanda and Uganda (1% collectively). According to the latest estimates by UNHCR (2014), Kenya hosts over 580, 000

registered refugees and asylum seekers, and Somalia remains the highest source country followed by South Sudan, Ethiopia, Congo, Sudan, Burundi, Eritrea, Rwanda, Uganda, and others.

According to Abdi (2004), the reduction in the number of refugees admitted to high-income countries is attributable to the fear of terrorism. For example, the number of Somali refugees hosted by Western countries has diminished since the terrorist attacks of September 11, 2001 in the United States. In fact, in response to the September 11, 2001 terrorist attacks, the US Department of Homeland Security temporarily froze admissions of all refugees into the country for three months, bringing total refugee admissions to their lowest point in the refugee program's history (Kerwin, 2012). In the year 2002, when new policies regarding refugees' admission to the United States (US) were implemented, the number of refugees admitted into the U.S. dropped significantly and this contributed to the refugee resettlement program's largest admissions drop in 25 years (from 68,428 in 2001 to 27,508 in 2002). Consequently, the number of refugees, particularly Somali refugees, has been on the increase in Kenya since then (Abdi, 2004; Lindley, 2011; Smyser, 1985).

About half of the 16 million refugees worldwide are children (Doebbler, 2009; UNHCR, 2010). These refugee children, like any other children, need to be educated (Dryden-Peterson, 2012). The importance of education for refugee children cannot be overemphasized. Eisenbruch (1988) suggested that education is critical in restoring social and emotional healing of refugee children. The UNHCR (2000) stated that education is not only a human right but also an essential component of refugee children's rehabilitation. Wilkinson (2002) indicated that education is a

human right as well as one of the most socializing activities for refugee children. However, research indicates that the education of refugee children in the host countries has generally not been accompanied by appropriate educational support that these children need (Dumbrill, 2008; Dryden-Peterson, 2011). The education provided to refugee children should include providing relevant and meaningful opportunities for school success of refugee students taking into account that they have been affected by war, have interrupted schooling backgrounds, and/or their culture, ethnicity, language, and religion are different from students in the host country (McBrien, 2005; Wilkinson, 2002). Often the different culture, ethnicity, and language of refugee students lead to discrimination against them in their host countries that in turn leads to high school dropout rates, poor performance, and social alienation (Devjee, 2008; Driscoll, 1999; Dumbrill, 2008; Karanja, 2010; Kronick, 2013; Oikonomidoy, 2007).

There is scarce literature on the education of refugees in developing countries, including Kenya. The few studies that have examined the education of refugee students in Kenya have cited several challenges that these students face (Kronick, 2013; Lindley, 2011). For example, Pavanello, Elhawary, and Pantuliano (2010) revealed barriers to educational access, such as some schools asking refugee parents to pay an admission fee before their children are admitted in public schools when primary education in Kenya is supposed to be provided at no cost. In addition to financial barriers, refugee students in Kenya also face discrimination, stigma, and isolation (Campbell, Crisp, & Kiragu, 2011). For example, Somali refugee children are discriminated against because they and their families are associated with terrorism, adhere to the Islamic religion, and/or engage in practices that are not common among the local population (Abdi, 2004; Bartoo, 2009). Pavanello et al. (2010) and Campbell (2006) noted the existence of

xenophobic attitudes towards the refugee population. Common in both rural and urban areas in Kenya, these attitudes were brought about by the fact that the Kenyans often view refugee families as competing for scarce jobs (Campbell, 2006). Further, Aukot (2003) noted that the refugees living in the Kakuma refugee camp in Kenya had difficulty with integration because they were faced with hostile treatment from the local population that felt that the UNHCR treated the refugees better than themselves. In addition to refugees facing challenges from the local residents, the government of Kenya restricts the movement of refugees, thus limiting their choice of accessing services such as schools (Banki, 2004; Campbell et al., 2011; Crisp, 2003) and even basic health care (Arnold, Theede, & Gagnon, 2014).

Diversity amongst the refugees is also a challenge for the refugees themselves as well as for people from the host society. Although refugees may come from the same continent and/or country, they have diverse cultures, backgrounds, and languages (Bartoo, 2009; Mareng, 2010). For example, the Somali refugees in Kenya speak several different languages and the languages spoken by the Somali refugees are different from languages spoken by refugees from Uganda, Rwanda, and Burundi (Bartoo, 2009). Consequently, as Mareng (2010) pointed out, refugees in Kenya from diverse African countries not only had trouble communicating with people in the host country but also with each other due to language differences. These communication barriers not only have implications for refugee students in school, but may also hinder the involvement of parents/guardians of refugee students in their children's education (Jeynes, 2003; Kronick, 2013; Watkins, Razee, & Richters, 2012).

The education of refugee students deserves greater attention due to the exceptional educational

needs of these students. Given their war-affected, traumatized, and disrupted schooling backgrounds (Brown, Miller, & Mitchell, 2006) and their difficulty with integration due to their ethnic, linguistic, and religious backgrounds (Kronick, 2013; Oikonomidoy, 2007), these students have higher school dropout rates that may lead to increased anti-social behaviors such as criminal gang activity, prostitution, and drug use (Kanu, 2008; Kaprielian-Churchill, 1996). Many refugee students experience extended periods of disrupted schooling (McBrien, 2005; Miller, Mitchell, & Brown, 2005). Refugee students of African origin are more likely to have spent longer periods of time in refugee camps where they received poor support and lived in conditions that contributed to significant and often chronic ailments (Horn, 2009; Mareng, 2010; Wilkinson, 2002). Some refugee students, such as "the lost boys of Sudan," have one or no parents to whom they can look to for support because they lost one or both of their parents due to the problems in Sudan (Luster, Qin, Bates, Johnson, & Rana, 2008, 2009). These factors suggest that the refugee students may face greater difficulty adjusting to and integrating into a new society and may be slower in learning academic concepts, skills, and a new language (Crisp, Morris, & Refstie, 2012; Karanja, 2010; Walker-Dalhouse & Dalhouse, 2009). Furthermore, if teachers in schools in the host society have limited knowledge of the backgrounds of the refugee students, they are more likely to rate these students academically as low achievers by their stigmatized label "refugees" rather than helping them to succeed (Hornstra, Denessen, Bakker, & Voeten, 2010; Mareng, 2010; Roxas, 2010, 2011; Sarroub, Pernicek, & Sweeny, 2007).

There is a need to identify factors that predict academic performance of the refugee students in host countries (Campbell, 2006; Kanu, 2008; Kaprielian-Churchill, 1996; Njuguna, 2013; Wilkinson, 2002). For example, refugee students' individual characteristics that predict academic

achievement need to be understood by teachers and others responsible for their education (Roxas, 2010) so that they will have a better idea of how best to provide services to refugee students in order to enhance their success. Moreover, the extent to which a refugee student's family characteristics predict academic achievement needs to be understood so that the family can support the student the best way possible. The extent to which teacher factors predict students' academic achievement need to be examined so that characteristics of teachers that lead to better academic performance by refugee students can be identified and improved to facilitate the successful education of refugee students.

1.2. Statement of the Problem

Given the heterogeneous and diverse nature of refugee students in Kenya along with challenges that these students face, a large number respond negatively to the education process, typically resulting in low achievement and high dropout rates. As indicated above, many of the refugee students who drop out of school turn to undesirable options such as joining criminal gangs and early marriages. Engagement in such options poses a risk to the economy of Kenya and a threat to the security of its people. It is therefore important to identify factors that affect the learning and achievement of refugee students in Kenya.

Consequently, the purpose of the present study was to examine empirically the extent to which student, family, class/teacher, and school factors explain refugee students' academic achievement in Grades 7 and 8 and Forms 1 and 2 in Kenyan schools. At Grades 7 and 8, students prepare for transition from primary school to secondary school; at Forms 1 and 2, students prepare for senior high school. Grades 7 and 8 and Forms 1 and 2 were selected because

this age group constitutes students who are at risk of dropping out of school either to be married off, engage in domestic work, or join a criminal gang.

The current study used a quantitative non-experimental descriptive survey approach to examine factors that predict refugee students' academic achievement at Grades 7 and 8 and at Forms 1 and 2 in Kenya. Most studies have used a qualitative approach to examine challenges refugee students face in schools (e.g., Brown, Miller, & Mitchell, 2006; Campell, 2006; Codjoe, 2007; Kanu, 2008, Karanja, 2010; Mareng, 2010; McBrien, 2005, 2011; Oikonomidoy, 2007; Roxas, 2010; Walker-Dalhouse & Dalhouse, 2009). While the results of the qualitative studies are informative, it is hoped that the results of the current study would have greater generalizability. The specific research questions addressed were:

At the student level

1. To what degree do refugee students' age, gender, grade-level, self-efficacy, and a teacher's expectations for each refugee student predict their academic achievement?
2. To what degree do refugee students' parents'/guardians' age, gender, level of education, housing, family type, and involvement predict their academic achievement?

At the class/teacher level

3. To what extent do refugee students' teachers' age, gender, teaching experience, qualifications, self-efficacy, and expectations for refugee students predict refugee students' academic achievement?

At the school level

4. To what extent does the location of the school a refugee student attends predict refugee students' academic achievement?

1.3. Delimitations of the Study

Due to fiscal and time constraints, it was not possible to conduct a longitudinal study where a group of students would be followed across the four grade levels. Additionally, due to limited resources, it was not possible to include a control group of non-refugee students against which to compare the results obtained for the refugee students.

1.4. Definitions of Terms

Some terms used in this dissertation may take on different meanings when used in different contexts. The following are definitions of terms as used in this dissertation.

Academic Achievement: Attainment in academic subjects. In the present study, academic achievement was defined as the mean grade point average of the final year scores for the five compulsory subjects of English, Mathematics, Science, Social Studies, and Kiswahili.

Academic Self-Efficacy (ASE): Self-Efficacy for Self-Regulated Learning (SESRL). In the present study ASE and SESRL are used interchangeably to refer to self-regulatory strategies that students use in the academic domain.

Family Involvement: In the present study family involvement refers to parents' or guardians' participation in their children's home and school activities with the intention of fostering academic success.

Family Involvement Questionnaire: Parent/guardian involvement questionnaire. In the present study, Family Involvement Questionnaire (FIQ), parent involvement questionnaire, parent/guardian involvement questionnaire, parent involvement scale all refer to the same thing.

Family Type: The type of family that a student lives in that is either parent (biological parent) headed or guardian (non-biological parent-may be a relative or non-relative) headed.

Guardian: An adult who is not a biological father or mother to a student but who hosts and takes care of a student by overseeing the student's needs. Guardians may include blood relatives such as grandparents, uncles, and aunts, and non-relatives such as friends, church members, and community leaders.

High Income Countries (HIC): Developed countries. HIC may be used interchangeably with developed countries or first world countries as referred to by the local people.

Home-Based Involvement: Activities that parents/guardians engage in at home with the purpose of supporting their children's education.

Home School Conferencing: Activities that parents/guardians and teachers engage in to promote mutual understanding between the families and schools for the benefit of the students.

Immigrant: An individual who voluntarily moves to a different country in pursuit of a better life, better economic conditions, for education, or for family reasons. Immigrants have the freedom to re-enter their homeland any time they wish.

Low Income Countries (LIC): Developing countries or less developed countries. LIC may be used interchangeably with developing countries or third world countries as referred to by the local people.

Parent: An adult who is the biological father or mother of a refugee student.

Parent/guardian: Any adult who is responsible for the refugee student, who hosts and takes care of a refugee student by overseeing and providing for the student's needs.

Parental Involvement: Home and school activities that family members (parents and guardians) participate in with the intention of improving their children's educational achievement. They include activities at home and at school. In the current study, the terms parental involvement, parent/guardian involvement, and family involvement refer to the same thing. Therefore, they are used interchangeably.

Permanent Houses: Houses that are expensive to construct and are mostly rented or owned by people of average and/or high socio-economic status.

Refugees: Persons residing outside their countries and unable or unwilling to return to their home countries due to fear of persecution because of their race, religion, nationality, political opinion, or membership in a particular social group.

Rural Schools: Schools outside the Kenyan Capital City-Nairobi County. These schools are located on the outskirts of Nairobi County and in remote parts of Nairobi's neighboring districts.

School-Based Involvement: Activities parents/guardians engage in at school to support their children to succeed in education.

Semi-Permanent Houses: Houses that are cheap to construct, mostly found in informal settlements and are mostly owned by people of low socio-economic status.

Urban Schools: Schools within the Kenyan Capital City-Nairobi County.

1.5. Organization of the Dissertation

Chapter 1 included a brief overview of the background to the problem, the purpose and corresponding research questions to be addressed, the delimitations of the study, and operational definitions of terms. Chapter 2 begins with a discussion of the theories that inform the current study. It also covers the review of related literature under individual characteristics, family characteristics, teacher/classroom characteristics, and school characteristics. Chapter 3 describes the methods employed in answering the research questions. The aspects discussed include the research design, study locale, participants' selection and characteristics, measurement of the independent and dependent variables, data collection, logistical and ethical considerations, and data analysis. Chapter 4 is divided into two sections. First, examination of psychometric characteristics of the research instruments are presented (these include minimum, maximum, mean, standard deviation, Cronbach's alpha and correlations among the subscales); second, the analyses and interpretation for the main research questions are presented. Chapter 5 is divided into seven parts. The purpose of the research and a summary of the methods used to address the purpose is provided in part 1. The results are summarized in part 2. Part 3 contains a discussion

of the results in terms of the literature reviewed in Chapter 2. The limitations of the study are presented in part 4, followed by implications for practice in part 5. The last two parts contain recommendations for future research and conclusions drawn from the results and in light of the limitations of the study in part 4.

Chapter 2

Review of Related Literature

This chapter begins with a discussion of the theories that inform the current study. It also covers the review of related literature under individual characteristics, family characteristics, teacher characteristics, and school characteristics. Individual characteristics include student self-efficacy, and additional status variables (age, gender, and grade). Family characteristics include parental involvement, and additional status variables (parent/guardian age, gender, level of education, family type, and housing status). Teacher characteristics include teacher expectations, teachers' self-efficacy, and additional status variables (teacher age, gender, qualifications, and experiences). School location is the only variable discussed under school characteristics. The chapter concludes with a summary of the literature reviewed.

2.1. The Theoretical Framework

The theoretical framework for the present study was informed by six theoretical models. The first and overarching theory was the bio-ecological theory developed by Bronfenbrenner (1979, 2005). Given the importance of self-efficacy, Bandura's (1986, 1997) social cognitive theory was included. Kohl, Lengua, and McMahon's (2000) theoretical model of parental involvement, which was developed from Epstein's (1995) framework of overlapping spheres of influence, was included given the influence of family on the student's progress through school. The last two theories, Merton's (1948) self-fulfilling prophecy theory and Rosenthal and Jacobson's (1968) theory of the Pygmalion effect, were also included given the self-fulfilling prophecy and the

Pygmalion effect may also be influential upon a student's performance in school.

2.1.1. *Bio-Ecological Theory*

Bronfenbrenner's (1979, 2005) bio-ecological theory includes five systems that explain the differences in individuals' knowledge, development, and competencies through the support, guidance, and structure of the society in which they live. The five systems can be arranged in the hierarchical way shown in Figure 1.

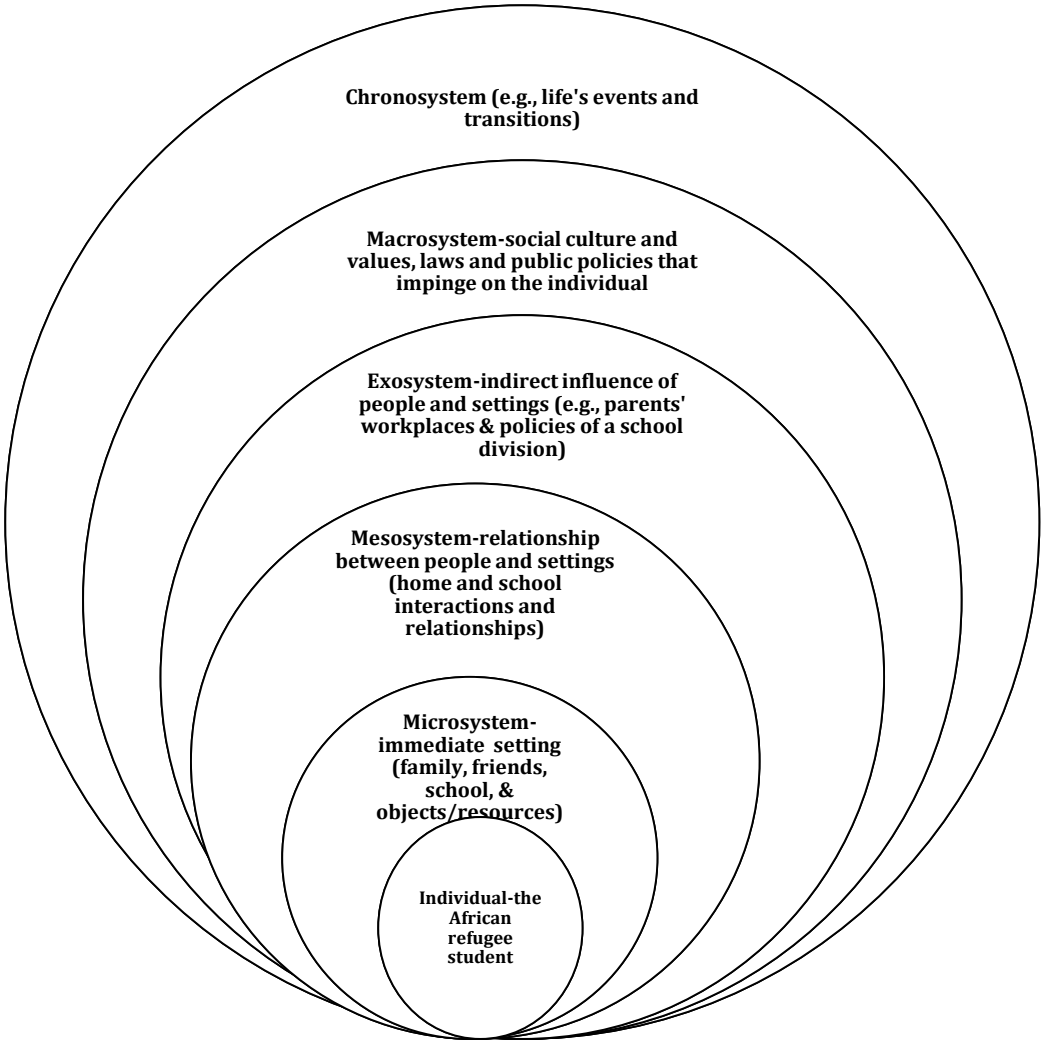

Figure 1*: The bio-ecological model (adapted from Bronfenbrenner, 1979, 2005)*

As shown in Figure 1, the microsystem is nested within the mesosystem, which is nested within the exosystem, which is nested within the macrosystem that is nested within the chronosystem. The microsystem is the setting within which the individual interacts directly, such as the family or the classroom. The mesosystem consists of the environment in which two or more microsystems interact, such as the connection between a child's home and the school. The exosystem is an environment in which individuals are indirectly involved and it is external to their experience, yet it affects them. Such an environment could be a parent's workplace or policies of the school. The macrosystem is the larger cultural context. It is at this level where we have cultural ideologies, laws, and public policies that impinge on the individual, such as policies from the ministry of education and political and academic views on children's education.

A key element of the model is the interactions among the elements at two or more levels (Bronfenbrenner, 1979, 2005). Bronfenbrenner (2005) called these bi-directional influences and showed how they occur among all levels of the model. The chronosystem is the last system that Bronfenbrenner developed. This system develops as a result of a person's experience in life. It includes environmental events and transitions in an individual's life, and the history of an individual. These events and transitions may include movement from one environment to another such as migrating from one country to another or moving from a rural to an urban setting.

The current study is situated at the mesosystem level, that is, the immediate or direct influence of the relationships between and among the microsystems on students' academic achievement. According to the bio-ecological theory, if the relationships between a child and the elements in the microsystem break down, the child will not have the tools to explore other parts of their

environment (Bronfenbrenner, 1979, 2005). Consequently, the review of literature is restricted only to the influence of the microsystem and the mesosystem levels on students' academic achievement.

2.1.1.1. Microsystem

The family, peer groups, neighborhoods, and teachers are the most immediate and direct influences on children's development (Epstein, 1995; Mistry, White, Benner, &Huynh, 2009; Sarroub et al., 2007). The influence can occur in two directions - both away from the child and toward the child (Bronfenbrenner, 1979, 2005). For example, in the home setting, parents may influence their children's beliefs and behavior and children may influence the behavior and beliefs of their parents (Seginer & Vermulst, 2002; Sheldon & Epstein, 2005). In a school setting, teachers may influence the behavior and beliefs of their students and students may influence their teachers' beliefs and behavior (Oikonomidoy, 2007; Rubie-Davis, 2006, 2007). Additionally, teachers may influence the beliefs and behaviour of parents and parents may influence the beliefs and behaviour of teachers who may in turn influence the beliefs and behaviour of students (Walker-Dalhouse & Dalhouse, 2009).

2.1.1.2. Mesosystem

As two microsystems begin to work together, for example a teacher and a parent working together to educate a child, it happens through the mesosystem. If there are conflicts between teachers and the family, this affects the child. According to the bio-ecological theory, if the relationships between the immediate microsystems break down, children will not have the tools

to explore other parts of their environment (Bronfenbrenner 1979, 2005; Sarroub et al., 2007). For example, if there is a problem between the family and the school, it is likely that the child's performance will be affected (Walker-Dalhouse & Dalhouse, 2009).

2.1.2. *Relating Bronfenbrenner's Microsystems and Mesosystem to the Students' Academic Achievement.*

Numerous studies have found that students' personal characteristics can interact with family and school characteristics at the mesosystem level and that the nature of the interactions influences students' academic achievement (e.g., Brown, Miller, & Mitchell, 2006; Codjoe, 2007; McBrien, 2005; Oikonomidoy, 2007; Roxas, 2010; Walker-Dalhouse & Dalhouse, 2009; Wilkinson, 2002). For example, a parent's involvement in the child's education or lack thereof may have an impact on their child's achievement. The relationship between a student and the teacher as well as the relationship between the student's family and the school may also impact the student's performance. Epstein (1995), in her theory of the overlapping spheres of influence, called for greater school and family collaboration so as to facilitate students' performance. Additionally, the Pygmalion effect (Rosenthal & Jacobson, 1968) and self-fulfilling prophecy (Merton, 1948) suggest that students do not operate in a vacuum but rather in an ecological system such as the home and the school. For example, if the parents and/or teachers hold the view that a student is not working up to the best of his/her ability, then pressure would be put on the teacher in the absence of an intervention designed for fostering greater effort on the part of the student. If the experience of a student is such that he/she feels he/she is not capable yet he/she is, then in the absence of an intervention, the student will continue to perform poorly. When parents and

teachers work collaboratively, students benefit (Merton, 1948; Rosenthal & Jacobson, 1968). Furthermore, the self-efficacy theory (Bandura, 1986) suggests that human attainment depends on interactions between one's behaviors, personal factors, and the environmental conditions. All these suggestions point to the fact that the individual, family, and school play a major role in influencing students' performance.

The remainder of this chapter reviews micro- and mesosystem level factors that influence students' academic achievement under three main headings: individual characteristics, family characteristics, and teacher characteristics.

2.2. Individual Characteristics

Individual or personal characteristics of a student can greatly influence a student's development and progress (Kaprielian-Churchill, 1996; Stermac, Elgie, Dunlap, & Kelly, 2010; Wilkinson, 2002). In the current study, individual characteristics that are considered include student self-efficacy, age, gender, and grade level.

2.2.1. *Student Self-Efficacy*

According to Bandura (1997), perceived self-efficacy affects behavior not just directly but also indirectly by affecting other determinants of behavior. The importance of self-efficacy in adolescents' lives is undeniable. This is because adolescents' go through a crucial transition period where they need to make decisions that determine their future (Bandura 1994; Willemse, 2008). Bandura (2006) acknowledges that adolescence is a time for personal growth through the mastery of new skills and social relationships, and that the middle and high school years are

crucial for the cultivation of positive self-efficacy. Self-efficacy can influence the actions adolescent students may choose to undertake, the amount of effort they put into given tasks, how long they can persevere in the presence of difficulties, and their resilience in difficult circumstances. However, it is important to note that during adolescence, environmental and social changes can undermine an individual's sense of control over the occurrences in their life and hamper the development of self-efficacy. Therefore, examining self-efficacy in adolescence is key to understanding why some adolescent students succeed in school while others do not.

Self-efficacy is grounded in a larger theoretical framework known as social cognitive theory (Bandura 1986, 1997), which suggests that human attainment depends on interactions between one's behaviors, personal factors (such as thoughts and beliefs), and environmental conditions. Bandura (1986) advanced a view of human functioning that gives a central role to cognitive, vicarious, self-regulatory, and self-reflective processes in human adaptation and change. Bandura's (1986) theory views people as self-organizing, proactive, self-reflecting, and self-regulating rather than as reactive organisms shaped by environmental forces or driven by hidden inner impulses. Human functioning is therefore viewed as the product of an active interplay of personal, behavioral, and environmental influences as illustrated in Figure 2 below.

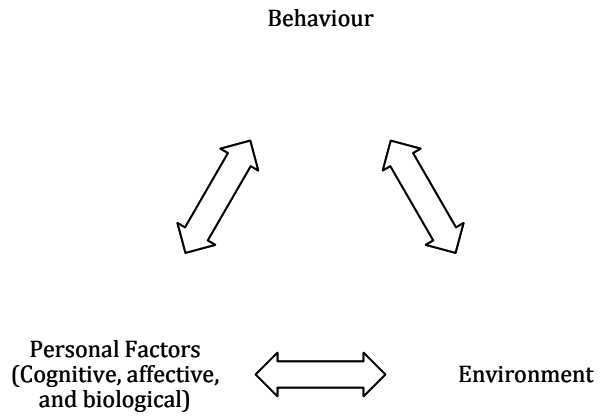

Figure 2: *Bandura's concept of triarchic reciprocity of behaviour.*

Bandura's (1986) social cognitive theory suggests that people's interpretation of the results of their own behavior inform and alter their environments and the personal factors they possess, in turn, inform and alter subsequent behavior. Bandura's (1989) social cognitive theory lays emphasis on understanding human cognitions, actions, and emotions and is grounded on the assumption that people are capable of self-reflection and also able to control and regulate themselves. Bandura (1986) considered self-reflection the most unique human capability through which people evaluate and alter their own thinking and behavior. These self-evaluations include perceptions of self-efficacy. In the case of students, self-regulation in academic, social, and emotional domains is key to their success in education.

Self-efficacy theory (Bandura, 1986) is mainly concerned with the personal cognition factor of the triadic reciprocal association. The theory suggests looking at the effect of cognitive factors on behavior and the environment as well as the effect that a person's behavior and the environment have on a person's cognitions (Maddux, 1995). The self-efficacy theory stresses

that human action and success depend on the interaction between one's personal thoughts and a given task (Bandura 1986, 1997). For example, individuals with a low sense of self-efficacy are likely to possess negative thoughts and think of a task's demands as threatening and not as challenging, and therefore such individuals may set low objectives for themselves (Bandura 1994; Md & Ali, 2009). Bandura (1986) has called the belief that students have in their own behavioral capacities as perceived self-efficacy and has defined this as: ''people's judgment of their capabilities to organize and execute courses of action required to attain designated types of performances'' (p. 391). According to Bandura (1977), self-efficacy beliefs are based on previous performances, observation of others performing the task, verbal persuasion, and physiological and emotional states. The beliefs that individuals have of themselves are the key element in exercising control and personal efficacy. They affect behavior in two ways: individuals engage in tasks in which they feel competent and confident and avoid tasks in which they feel incompetent. Self-efficacy helps to determine how much effort one puts into a task. For example, people with low self-efficacy may believe that a task is difficult and thus build stress, depression, fear, and a narrow visualization on how to solve problems. The opposite may be true of individuals who possess high self-efficacy. Bandura (1977) adds that people fear and tend to avoid threatening situations they believe exceed their coping skills, but get involved in activities and behave confidently when they judge themselves capable of handling situations.

A student's self-efficacy can be best understood as a differentiated set of self-beliefs specific to students' different areas of functioning, such as social self-efficacy, academic self-efficacy, and emotional self-efficacy (Muris, 2001). In other words, self-efficacy is considered a domain specific construct, as no person can feel competent at all tasks or in all areas (Bandura, 1997;

Maddux, 1995; Valentine, DuBois, & Cooper, 2004). Across the diverse domains of functioning (e.g., social, academic, and emotional), self-efficacy beliefs affect the courses of action people choose to pursue, how much effort they put into given domains, how long they will persevere in the face of difficulties and failures, their resilience to adversity, whether their thought patterns are self-hindering or self-facilitating, how much stress and depression they experience in coping with taxing environmental demands, and the level of accomplishments they recognize (Bandura, 1991, 1997; Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; Bandura, Caprara, Barbaranelli, Pastorelli, & Regali, 2001).

2.2.1.1. Self-Efficacy for Self-Regulated Learning and Academic Self-Efficacy

Self-efficacy for self-regulated learning has been defined as the degree to which students are metacognitively, motivationally, and behaviorally active participants in their own learning process (Zimmerman, 2008). Academic self-efficacy has been defined as personal judgments of an individual's capabilities to organize and execute courses of action to attain designated types of educational performances (Zimmerman, 1995, p. 203). Bandura (1986) emphasizes self-regulation by which individuals can explore their thought processes in order to evaluate the results of their actions and plan alternative ways to success. For students, especially those who are at the adolescent stage, success in education requires self-regulation and management of one's own learning environment (Klassen, 2010; Usher & Pajares, 2008).

Research has shown that students who develop strong academic and self-regulatory self-efficacy beliefs are better able to manage their learning and to overcome the temptations and social pressures to engage in behaviors such as delinquency that can easily affect their academic

success (Bandura et al., 2001). In contrast, it has been found that students who have a low sense of self-regulatory and academic self-efficacy are more likely to be involved in problem behaviors such as delinquency, dropping out of school, and failing in school subjects (Bandura, 1997; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Bandura et al., 2001), which in turn affects their overall academic outcomes.

Caprara, Fida, Vecchione, Del Bove, Vecchio et al. (2008) examined the developmental course of perceived efficacy for self-regulated learning and its contribution to academic achievement and the possibility of remaining in school in a sample of 412 Italian students (48% males and 52% females) ranging in age from 12 to 22 years. They noted that students who had the lowest decline in self-regulatory efficacy had the highest high school grades and were more likely to remain in senior high school. Additionally, Caprara et al. (2008) revealed that high perceived efficacy for self-regulated learning in junior high school contributed to junior high school grades and self-regulatory efficacy in high school. Their study revealed a strong association between self-efficacy for self-regulated learning (SESRL) and the adolescent students' grades at different times of schooling, junior and high school.

Klassen (2010) examined self-regulatory efficacy among adolescents with and without learning disabilities (LD) and found that students with LD who scored low on self-regulatory efficacy were more likely to have a lower end of term English grade than their higher-scoring counterparts. Mills, Pajares, and Herron (2007) examined the effect of SESRL on French students' (N = 303) intermediate French language achievement. They found a strong association between SESRL and students' achievement in French Language and students' final course

grades. Similarly, Zimmerman and Martinez-Pons (1990) and Zimmerman, Bandura, and Martinez-Pons (1992) found self-efficacy for self-regulated learning as a contributing factor to academic achievement. Students' academic self-efficacy beliefs have been shown to be significant predictors of students' academic achievement (Ahmad, Hussain, & Azeem, 2012; Caprara et al., 2008), course selection (Britner & Pajares, 2006), academic persistence and achievement (Britner & Pajares, 2006; Klassen, 2004; Pintrich & De Groot, 1990), college performance and persistence (Gore, 2006; Robbins, Lauver, Le, Davis, Langley, & Carlstrom, 2004), GPA (Robbins et al., 2004), and academic aspirations (Bandura et al., 2001).

As can be seen from the first paragraph of this subsection, self-efficacy for self-regulated learning (SESRL) is closely related to academic self-efficacy in that both involve self-regulation in learning academic subjects. Many researchers have reported a direct positive relationship between academic self-efficacy (which requires self-regulation in learning academic subjects) and academic achievement (e.g., Bandura et al., 1996; Caprara, Barbaranelli, & Pastorelli, 1998; Chemers, Hu, & Garcia, 2001; Greene, Miller, Crowson, Duke, & Akey, 2004; Pintrich & DeGroot, 1990; Schunk, 1994; Sharma & Silbereisen, 2007; Zimmerman & Bandura, 1994).

2.2.1.2. Social Self-Efficacy

Social self-efficacy can be defined as a willingness to initiate behavior in social situations (Sherer & Adams, 1983). According to Bandura, Pastorelli, Barnabarelli, and Caprara (1999), social self-efficacy beliefs refer to the ability to react competently in an interpersonal situation. Smith and Betz (2000) define the social self-efficacy domain as the level of an individual's confidence in his or her ability to engage in social interactional tasks that are essential in building

and maintaining social relationships, as well as exhibiting skillful social behavior within interpersonal relationships. A strong belief in one's own capability to adequately cope with interpersonal relationships is critical for promoting successful adaption and well-being (Di Giunta, Eisenberg, Kupfer, Steca, Tramontano, & Caprara, 2010). This may include the ability to initiate and sustain friendships, co-operate with others, and to deal with disharmonious situations in socially appropriate ways. The abilities to establish friendships, form sustainable peer relationships, receive positive peer praise, and behave in a prosocial manner at school are all important tasks for success at school and have been found to be directly related to academic achievement (Patrick, Hicks, & Ryan, 1997). The adolescents' beliefs that they have about their ability to form and sustain satisfying peer relationships also enable them to have academic success (Bandura et al., 1996). The need to be accepted by peers is fundamental in the developmental stage of adolescence (Geldard & Geldard, 1999).

Higher levels of social self-efficacy have been found to correlate negatively with interpersonal stress (Matsushima & Shiomi, 2003) and phobia (Muris, 2002). Matsushima and Shiomi (2003) found a positive correlation between social self-efficacy and interpersonal stress coping. Adolescents who acquired a strong sense of efficacy for coping with interpersonal demands can be less vulnerable to peer pressure and dysfunction (Caprara, Steca, Cervone, & Artistico, 2003). This suggests that the higher social self-efficacy one has, the less interpersonal stress one is likely to experience. A student who is less vulnerable to peer pressure is likely to succeed academically.

Bandura et al. (1999) tested the connection between self-efficacy and childhood depression, and found that low levels of social self-efficacy were predictive of long-term depression. Similarly, Muris (2002) reported a strong association between social self-efficacy and social phobia. Long-term depression and social phobia can hinder a student's academic success. For example, a student who is depressed may hardly be able to work in harmony with those around him or her. Besides, it may be difficult for such a student to function well in a discussion group that could foster academic success.

2.2.1.3. Emotional Self-Efficacy

According to Muris (2001), emotional self-efficacy refers to the perceived ability to cope with emotions. For adolescents, coping with emotions may encompass one's capability to resist peer pressure that could otherwise lead one in high-risk activities, such as use of drugs and alcohol. It is important to note that negative emotions are a natural part of life, and that negative emotions (such as anger, impatience, intolerance, jealousy, or even looking down upon others) need to be controlled. The lack of ability to control negative emotions may result in social sanctions and poor relationship with peers and other people in the community. The positive belief that one holds about the ability to manage and control negative emotions allows one to handle interpersonal relations more effectively than if one lacked such a belief (Caprara et al., 2003).

Self-efficacy beliefs not only involve the exercise of control over action but also the self-regulation of various personal determinants of learning, such as thought processes and motivation (Bandura, 1997). For example, according to Caprara, Barbaranelli, Pastorelli, and Cervone (2004), self-regulatory self-efficacy concerns peoples' perceptions for relating their

actions in harmony with personal norms when they are faced with peer pressure for engaging in antisocial conduct. It has been found that individuals who are good self-regulators of their emotions do better academically than those who are poor self-regulators (Zimmerman & Schunk, 1989), and that students who are considered to have good self-control and can control their emotions use their own performances as a guide for assessing their self-efficacy (Schunk, 1995).

Research has also shown a significant relationship between emotional self-efficacy and depression and anxiety (Muris, 2002), negative social behaviours (Caprara, Regalia, & Bandura, 2002), and hopelessness and social withdrawal (Caprara et al., 2003). In Muris' (2002) study, low levels of emotional self-efficacy were found to correlate highly with high levels of anxiety and depressive symptoms. In a later study, emotional self-efficacy was shown to mediate the associations between attentional control and both emotional and behavioral problems in preadolescent youth (Muris, Mayer, van Lint, & Hofman, 2008). Caprara et al. (2002), in turn, found that the inability to control one's emotions could predict negative social behaviors, and negative social behaviors could then result in feelings of hopelessness and social withdrawal; both hopelessness and social withdrawal could eventually affect students' academic achievement.

2.2.1.4. Self-Efficacy and Refugee Students

Research studies on self-efficacy for self-regulated learning, social self-efficacy, and emotional self-efficacy on the refugee population are rare. However, there are a few studies suggesting that some refugee students have good self-efficacy beliefs in specific domains and that these students are likely to achieve higher in academics than those who do not have such self-efficacy beliefs

(Brown, Miller, & Mitchell, 2006; Codjoe, 2007; Hatoss & Sheely, 2009; Karanja, 2010; McBrien, 2005; Oikonomidoy, 2007, Sarroub et al., 2007). For example, Oikonomidoy's (2007) study of Somali girls and their education in the United States suggested that the girls expressed high self-efficacy for learning school subjects, as manifested in their high motivation, aspirations, and determination amidst frustrations. The study indicated that the Somali female students expressed a strong interest in furthering their education. The refugee students discussed professional careers for their future and gave education a central role in their lives. While these students admitted that learning the English language was a difficult and at times frustrating process, they appeared very successful in their language learning due to the effort they put into their studies. Oikonomidoy reported that all the participants in the study mentioned that, upon arrival in the US, they did not know how to speak English. All of the students talked about their frustration during their first days in schools in the US (especially when in some of those schools there were no English language programs for immigrant/refugee students). However, they mentioned that they used resources both within their ethnic community and in school to work on their English language skills, a manifestation of self-efficacy for self-regulated learning in English as a school subject. While Oikonomidoy's (2007) study did not directly measure the effect of self-efficacy on academic achievement for refugee students, the determination, aspirations, and resilience in the Somali girls is indicative of high self-efficacy for self-regulated learning that may have enhanced their success in education.

2.2.1.5. Summary of the Self-Efficacy Literature

In summary, studies that have been conducted to examine the relationship between different

aspects of students' self-efficacy – such as self-efficacy for self-regulated learning, self-efficacy for relating and communicating well with others (social self-efficacy), and self-efficacy for controlling one's emotions (emotional self-efficacy) – and their academic achievement provide important information for educators and other practitioners in the field of education. It can be argued that self-efficacy for self-regulation is a fundamental component of students' academic performance in terms of influencing students' motivation, self-regulatory behaviors, and other domains or contexts that directly affect students' outcomes. The studies that have examined the relationship between self-efficacy for self-regulated learning, self-efficacy for regulating emotions (emotional self-efficacy), and self-efficacy for socializing with others (social self-efficacy) and academic achievement for students have been mostly conducted in Western countries (e.g., Klassen, 2010; Muris, 2001; Usher & Pajares, 2008). Studies that have examined self-efficacy with at-risk populations, such as refugee students, are rare. The few qualitative studies that have focused on the refugee student population have mostly examined the challenges facing this population in general (e.g., Dumbrill, 2008; Hatoss, & Huijser, 2010; Kanu, 2008; Kaprielian-Churchill, 1996; McBrien, 2005, 2011; Miller, Michelle, & Brown, 2005; Wilkinson, 2002), but have not specifically examined the extent to which self-efficacy in different domains affects the refugee students' academic achievement. The current study examined the extent to which self-efficacy for self-regulated learning, social self-efficacy, and emotional self-efficacy predict refugee students' academic achievement in Kenyan primary and secondary schools.

2.2.2. *Additional Student Characteristics*

Additional student characteristics that were considered in the present study include age, gender

and grade level.

2.2.2.1. Student Age

The age of students is regarded as an important factor in students' academic achievement (Mlambo, 2012; Wilkinson, 2002). The influence of the age of students on their academic outcomes has been examined across different age and grade levels in different countries, including Canada (Wilkinson, 2002), Nigeria (Abubakar & Adegboyega, 2012; Abubakar & Oguguo, 2011), United States (Barua & Lang, 2009), Kenya (Hungi & Thuku, 2010). The findings have been mixed, with some studies reporting younger students outperforming older students while others reporting the opposite. Wilkinson (2002) examined the effects of students' grade placement in Canadian schools and found that students who reported to have been placed in grades appropriate for their ages were more likely to do well academically. In contrast, students who acknowledged to have been placed in grades inappropriate to their age were noted to perform more poorly. Abubakar and Adegboyega (2012) found a significant relationship between student age and achievement in Mathematics. They reported that age contributed 2% to students' grade point average (GPA) variance and had a positive correlation ($r = 0.142$) on GPA of Mathematics students. Hungi and Thuku (2010) examined the effect of age on students' academic achievement and found that younger students performed better than older students in both Mathematics and English.

Some studies report a negative impact of school entry age on adult educational attainment and other outcomes (Allen & Barnsley, 1993; Fredriksson & Ockert, 2006) while others find positive or no effects (Fertig & Kluve, 2005; Black, Devereux & Salvanes, 2011). Bedard and Dhuey

(2006) examined student performances across OECD countries and reported age differences in performance. They found that the oldest students scored 3 to 14 percentiles higher than the youngest students in grade 4, and three to nine percentiles higher in grade 8.

In the case of refugee students, ages at which they enter different grades may vary widely due to interrupted schooling (Brown, Miller, & Mitchell, 2006, Wilkinson, 2002). For example, in Kenya, admission of refugee students depends on their academic abilities and not their ages. Students who are placed in grades lower than their age are given leadership responsibilities to foster their self-esteem. Once these students start doing well academically, they are allowed to skip classes to catch up with their age appropriate peers.

2.2.2.2. Student Gender

Literature associated with gender differences in educational achievement is immense and complex (see e.g., Hadi & Al-Omar, 2013; Kahle, 2004; Kaya & Rice, 2010). Gender differences in education have been attributed to biological factors, gender theory, and school factors. Biological explanations suggest that gender differences in behavior, skills, and cognitive abilities are determined by biological factors such as brain organization, hormones, and genetics, and that these biologically determined differences in behavior and abilities are responsible for gender differences in educational attainment. Kimura and Hampson (1994) reported a correlation between fluctuations in testosterone in males and estrogen in females with performance on a variety of tests of cognitive ability. Other studies have reported gender differences in brain structure and function (Cahill, 2006; Halpern, 1997), which have been viewed as evidence that gender differences in educational achievement are biologically determined (Gurian, 2001; Sax,

2005). According to the gender theory, males and females come into the educational system with different behaviors, attitudes and values that result from childhood socialization in line with the cultural norms of being masculine and feminine (Hadi & Al-Omar, 2013; Weaver-Hightower, 2003). Within the gender theory perspective, discourses regarding boys' educational achievement tend to focus on the ways in which masculinities are created, sustained and reinforced in schools and in the wider society (Weaver-Hightower, 2003). In general, competing discourses include the existence of multiple masculinities that constantly struggle and contend for dominance (Weaver-Hightower, 2003), an emphasis of the importance of both micro-level factors within the school (playground interactions, curriculum materials) and macro-level factors in the wider society (economic changes, changing gender roles) in the construction and reinforcement of masculinities (Warrington, Younger, & Williams, 2000; Weaver-Hightower, 2003), and a recognition that hegemonic masculinity varies between social and ethnic groups (Gilbert & Gilbert, 2001).

Results from studies examining gender differences in academic achievement have been mixed, with some studies reporting male students outperforming female students while others reporting female students outperforming male students. What is common among many studies is that male students have traditionally outperformed female students in Mathematics and Science subjects whereas female students have outperformed male students mostly in Languages Arts and other art-based subjects (e.g., Francis, 2000; Kahle, 2004; Moore & Slate, 2008). For example, using data from the Trends in International Mathematics and Science Study (TIMMS), Kaya and Rice (2010) examined multilevel effects of student and classroom factors on science in Singapore, Scotland, Japan, USA, and Australia. They found a significant association between gender and

science achievement, with girls scoring 7 points lower than boys in Singapore and 12 points lower in Scotland. In most cases the gender differences in academic performance have been attributed to how individuals are socialized at an early age. For example, in some communities young girls are mostly socialized in domestic duties around the house while boys are exposed to harder hands-on work. In Kenya, Mensch and Lloyd (1998) found that girls' performance was poorer than boys' performance in the Kenya Certificate of Primary Education. The poorer performance was attributed to teachers' lower expectations of girls and traditional assumptions about gender roles.

2.2.2.3. Student Grade level

It is important to note that different factors affect students' academic achievement differently at different levels of schooling. For example, the effect of parental involvement in their children's education is determined to some extent by the child's grade level. A number of research studies have reported on changes in parental involvement in homework in relation to children's age and grade level. Cooper, Lindsay, and Nye (2000) noted that parents of high school students report giving their children more homework autonomy and less direct involvement than when the children were at the elementary school level. Worrell, Gabelko, Roth, and Samuels (1999) indicated that the amount of support given to children by parents during homework decreases with grade level even though the amount of homework increases through the elementary grades. In a review on parental involvement, Seginer (2006) found that home-based behaviors shift from facilitating school learning skills in preschool and kindergarten to helping with and checking homework in elementary school to motivational support in junior and senior high school. This

evidence suggests that parenting practices are therefore likely to result in differentiated impact on student achievement at different grade levels (Cooper, 2001). This view is supported by Jeynes's (2007) research review on the impact of parental involvement on academic achievement, which indicated that primary school studies have higher effect sizes than studies on high schools.

Differences in students' academic achievement at different grade levels also depend on children's own characteristics. For example, Zimmerman and Martinez-Pons (1990) examined differences in gifted students' self-regulated learning that were important in explaining students' verbal and mathematics self-efficacy. They reported that students from grade 11 surpassed students in grade 8, who in turn surpassed students in grade 5 on measures of self-regulatory learning. Other studies have found that children's self-perceptions of competence decline with the grade level from the time a student starts school through high school (Benenson & Dweck, 1986; Stipeck, 1981), with the most remarkable drop happening during the high school.

Differences in students' academic achievement at different grade levels may also depend on their teachers' characteristics that may facilitate or hinder students' academic outcomes. For example, research has found that teachers who teach in elementary schools have higher self-efficacy for classroom management and student engagement than teachers who teach at the secondary school level (Klassen & Chiu, 2010). High self-efficacy can, in turn, influence positively students' academic achievement, and if teachers who teach students at higher grade levels have lower self-efficacy than those who teach students in lower grades, then students in higher grade levels may perform more poorly than those in lower grades.

In sum, although a student's grade level may not directly influence their academic achievement, it is possible that other factors associated with the grade level eventually influence students' academic achievement. For example, grade placement may affect other student factors, such as age, that will in turn affect the student's performance (Wilkinson, 2002). Additionally, if a parent's involvement decreases with the student's grade or vice versa, this in turn affects the student's academic performance. For refugee students, grade placement is a fundamental component in their academic progress (Kanu, 2008; Wilkinson, 2002). Due to interrupted schooling, refugee students may be placed in grades with younger children, and this may affect their self-esteem that then may have a negative impact on their academic progress (Brown, Miller, & Mitchell, 2006; Kanu, 2008; Kaprielian-Churchill, 1996). However, other factors may act as buffers in the event that a refugee student's self-esteem is negatively affected by grade placement. Such protective factors may include a student's resilience and self-efficacy (Rutter, 1999).

2.3. Family Characteristics

There are a number of family characteristics that are thought to predict students' academic achievement. Family characteristics considered in the current study include parental involvement (parent/guardian involvement) and other additional parent status characteristics including parent age, gender, level of education, family type, and housing status.

2.3.1. *Parental Involvement*

Parental involvement is a family factor that can be understood in the light of both

Bronfenbrenner's (1979, 2005) bio-ecological theory and Epstein's (1995) theory of overlapping spheres of influence. Bronfenbrenner's (1979) theory influenced the development of Epstein's theory with an emphasis on collaboration between the family and the school microsystems in facilitating children's education at the mesosystem level.

Parental involvement in their children's education has been defined differently by different researchers and educators. Common among the definitions is the idea of looking at parental involvement in their children's education as a multidimensional process encompassing varying activities carried out by parents in the home, school, and community settings with the intention of fostering their children's academic success (Fan, 2001; Grolnick & Slowiaczek, 1994; Hoover-Dempsey & Sandler, 1997; Sui-Chu & Willms, 1996; Wong & Hughes, 2006). Definitions of parental involvement range from parental expectations, aspirations, interest, attitudes, and beliefs to more specific activities carried out in the home and the school. Parental involvement can therefore be viewed as representing many different parental behaviors and parenting practices, such as parents' communication with children about school (Christenson, Rounds, & Gorney 1992; Kim, 2002), parents' participation in school activities (Stevenson & Baker, 1987), parents' communication with teachers about their children (Epstein, 1991), and parental rules imposed at home that are considered to be education-related (Keith, Keith, Troutman, Bickley, Trivette, & Singh, 1993; Keith, Reimers, Fehrmann, Pottebaum & Aubey, 1986; Marjoribanks, 1983). In the current study, parental involvement refers to parents' and/or guardians' participation in home and school activities, as well as home and school communication, that foster children's academic achievement, as illustrated in Figure 3.

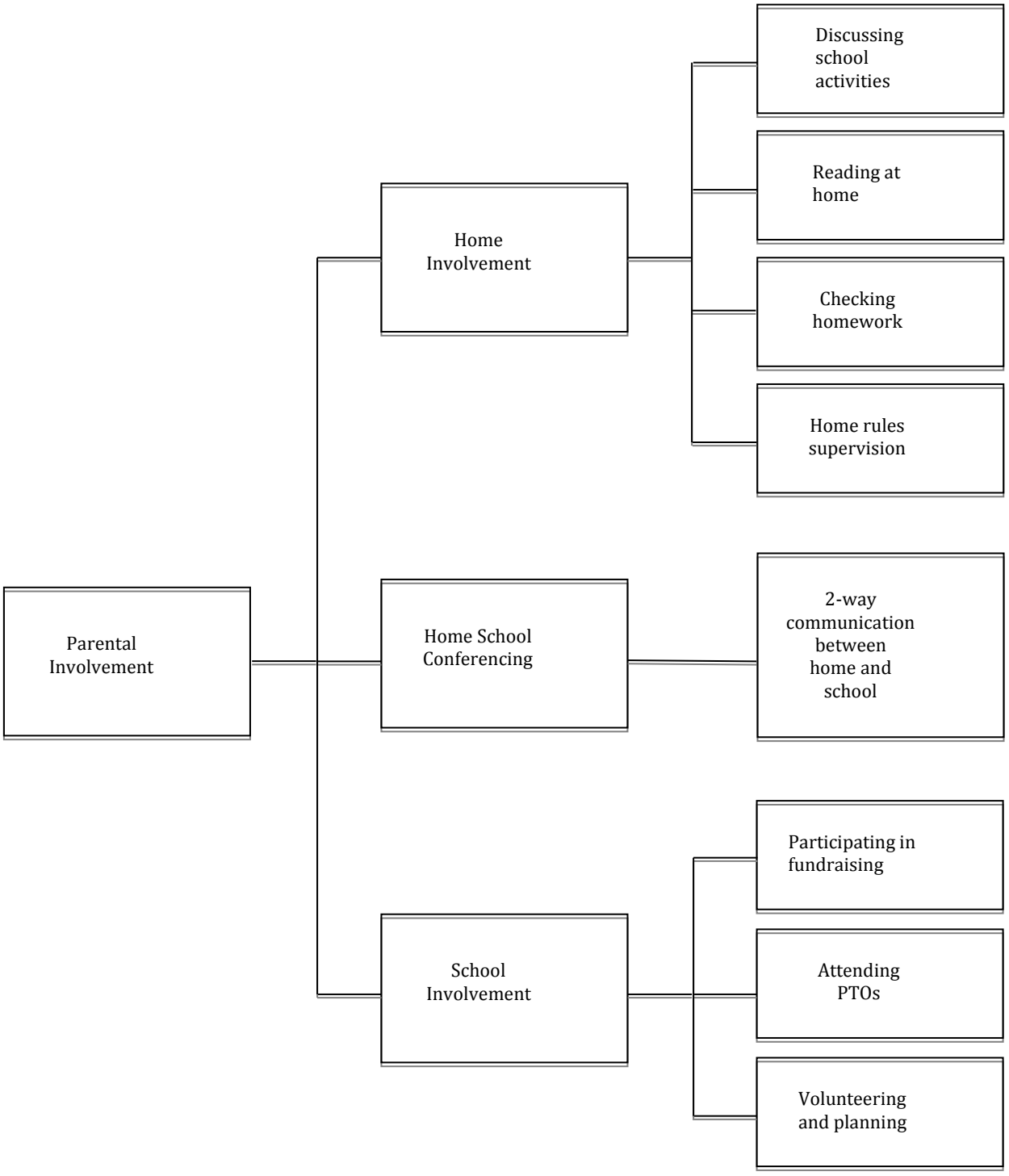

Figure 3: *A conceptual framework of some aspects of parental involvement*

2.3.1.1. Parental Involvement and Academic Achievement

Parental involvement has been found to influence young children's (e.g., Epstein, 2001; Fagan & Iglesias, 1999; Griffith, 1998; Miediel & Reynolds, 1999; Reynolds, 1992; Senechal & LeFevre, 2002; Shumow, Vandell, & Kang, 1996) as well as adolescents' academic outcomes (e.g., Hill, Castellino, Lansford, Nowlin, Dodge et al., 2004; Keith, Keith, Troutman, 1993; Muller, 1995; Russell & Elder, 1997; Shumow & Miller, 2001). However, aspects of parental involvement and parental involvement activities affect young children and adolescents differently. For example, parental activities at home involving reading, taking children to the library, and playing with children have been more commonly examined in studies with young children than with older children (e.g., Fagan & Iglesias, 1999). Similarly, parental school activities such as volunteering to help in class are used more with younger children than with older children (e.g., Miedel & Reynolds, 1999). However, parents' activities such as being a PTA member or attending school meetings and functions, tend to be found both with younger and older children and adolescents (e.g., Brody & Flor, 1998; Stevenson & Baker, 1987).

Generally, researchers have found parental involvement to be associated with students' academic performance as measured by scores on standardized achievement tests and academic assessments (Desimone, 1999; Domina, 2005; Jeynes, 2005; Keith et al., 1986), GPA (Kim, 2002; Rodriguez, 2002; Russell & Elder, 1997; Shumow & Miller, 2001), school grades (Bandura et al., 1996; Fehrman, Keith, & Reimers, 1987; Hill & Taylor, 2004), and teacher ratings of the student's academic performance in the classroom (Bogenschneider, 1997; Hamre & Pianta, 2001; Hara & Burke, 1998; Hill & Craft, 2003; Jeynes, 2003, 2007; Marcon, 1999;

McWayne, Hampton, Fantuzzo, Cohen, & Sekino, 2004; Stevenson & Baker, 1987). Research indicates that parental involvement can influence students' math proficiency and achievement (Epstein, 2001; Catsambis, 2001; Muller, 1995; Seginer & Vermulst, 2002; Sheldon & Epstein, 2005; Sirvani, 2007), and also can lead to gains in reading performance (Powell-Smith, Stoner, Shinn, & Good, 2000). Additionally, studies on the effects of parental involvement reveal that parental involvement is associated with fewer behavior problems in school (Domina, 2005), better attendance and class preparation (Simon, 2001), better course completion (Simon, 2001), and lower dropout rates (Rumberger, 1995). This suggests that parental involvement affects students' academic achievement by affecting students' behavior.

Several research studies have indicated that different aspects of parental involvement have positive effects on students' academic outcomes (Altschul, 2011; Domina, 2005; Fan, 2001; Fan & Chen, 2001; Fantuzzo, MacWayne, & Perry, 2004; Jeynes, 2005). For example, parents' home involvement, such as keeping close track of the children's school progress, was found to lead to increase in time spent on homework, which then had a positive effect on students' grades (Fehrman et al., 1987; Keith et al., 1986). Parent-child communication on school matters (Keith, Keith, Sperduto, Santillo, & Killings, 1998), learning (Kim, 2002), and choosing courses (Bogenschneider, 1997) have been reported to have a positive direct relationship with the students' GPA. Additionally, research has found a positive relationship between family involvement in homework and students' science report card grades (Van Voorhis, 2003), as well as involvement in intellectual activities and school grades through perceived competence (Grolnick & Slowiaczek, 1994). Similarly, a positive relationship has been found between parental involvement activities such as attending conferences/PTA meetings and students' GPA

(Russell & Elder, 1997; Rodrigues, 2002), volunteering and standardized test scores in mathematics and reading (Desimone, 1999), sending things to school and educational/occupational aspiration and academic achievement (Hill et al., 2004), and attending school activities and social emotional adjustment and academic adjustment (Shumow & Lomax, 2002).

In sum, several studies have found a positive relationship between parents' school involvement and academic achievement. Similar to the home-involvement, different aspects of school-involvement have differential effects on students' academic outcomes.

2.3.1.2. Parental Involvement among Minority Populations

Research indicates that the impact of parental involvement on academic achievement overall is significant among children from all ethnic (Altschul, 2011; Bogenschneider, 1997; Desimone, 1999; Keith et al., 1998; Van Voorhis, 2003) and income groups (Desimone, 1999; Gutman & Midgley, 2000). However, findings on the relationship between parental involvement and achievement have varied depending on the population examined (Barnard, 2004; Lopez, 2001; McWayne et al., 2004). The explanation to the differences in parental involvement may be traced back to the parents' own backgrounds and past experiences. For example, Romo and Falbo (1996) noted that many low-income, second-generation Latino parents experienced profound marginalization in U.S. schools as children and are hesitant to engage with the schools as parents. However, these parents invest in their children doing well in school and frequently communicate this to their children. Such parents are therefore more likely to participate in home activities than school-based activities. Parental involvement, defined as parent-teacher-

organization (PTO) involvement, monitoring, and educational support strategies, was reported to produce more beneficial effects among wealthy European American students than among African American, Hispanic, Mexican, and Asian American students from families of low socioeconomic status and students from single-parent households (McNeal, 1999). An explanation to this may be factors beyond parents' control. For example, language and cultural barriers between English-speaking teachers and Spanish-speaking parents are significant barriers to parental involvement at school (Reese, 2002; Romo & Falbo, 1996). In addition, economic circumstances of Mexican American families are a frequently cited obstacle in parental participation in that parents must direct most of their energies and time toward providing basic needs for their children, leaving very little time for involvement at school (Lopez, 2001; Romo & Falbo, 1996; Tapia, 2000). Statistically significant differences in parental involvement were found in the relationships between parental involvement (such as discussion with child about school, rules about homework, involvement in PTO, contacting school, and checking of homework) and student achievement in mathematics and reading among students from different racial/ethnic and economic groups (Desimone, 1999).

In a meta-analysis of the effects of parent involvement on minority students' academic achievement, Jeynes (2003) observed that parental involvement (such as communicating with the school, checking homework, encouraging outside reading, and participating in school activities) benefited African American and Hispanic/Latino students more than it did Asian American students. The author's explanation was that parental involvement may have the greatest impact in the absence of other cultural factors that promote academic achievement, such as the strong emphasis on education found in many Asian American cultures (Jeynes, 2003).

Research examining parental involvement among minority and immigrant populations indicates that parents get involved in their children's education in different ways. For example, some immigrant parents prefer home-based involvement to school-based involvement (Garcia, Akiba, Palacios, Bailey, Silver et al., 2002), possibly due to cultural beliefs and language difficulties (Lopez, 2001). Different beliefs that immigrant parents may hold regarding the value of education is argued to contribute to these parents' formation of different practices to help their children (Seginer, 2006). For example, Sikhs in the United States and Britain (Gibson & Bhachu, 1991), Chinese in Britain (Ran, 2001), and Koreans in the United States (Lee, 1991) who trusted schools to educate their children also closely monitored children's school work and encouraged their children to excel at school. In contrast, other minority parents, such as the African Americans (Ogbu, 1982), Mexicans born in the U.S. (Rodriguez, 2002) and Korean minority parents in Japan (Lee, 1991) may be less involved in their children's schooling.

2.3.1.3. Summary of Parental Involvement Literature

Several studies indicate that there is a significant positive effect of parental involvement on students' outcomes among children from all racial and income groups (Jeynes, 2003; Seginer, 2006). Parental involvement has been noted to affect students' academic achievement both directly and indirectly. Although parents' home and school involvement has been linked to students' outcomes, research indicates that as children grow older, parental involvement activities tend to shift (Seginer, 2006). For example, activities such as volunteering in the classroom and reading with children at home have been found to be more common among parents with young children than those with older children. Other activities, such as

communicating with children on school matters and monitoring school progress, have been found to occur more commonly among parents of older children than those of younger children. However, most of the studies with these outcomes have been conducted in the Western countries and whether similar effects of parental involvement exist in developing countries is yet to be established.

The few studies that have examined the relationship between parental involvement and academic achievement with the refugee population have been qualitative studies (e.g., Codjoe, 2007; Sarroub et al., 2007), and hence have limited generalizability. For example, Sarroub and colleagues' (2007) study indicated that lack of parental support and involvement affected negatively their participant's school performance. Since the student himself had taken on adults' roles of taking care of his parents as well as his siblings, it was challenging for him to succeed in school. Additionally, since there was no one to monitor his activities at home, his activities included playing video games all night, and skipping school regularly. In contrast, Codjoe (2007) found parental involvement in form of providing materials and encouraging their children to do well to be positively related to children's success in school. While suggestive, it is important to note that these qualitative studies have been small-scale and narrative in nature, and tell little about the extent to which academic achievement can be affected by parental involvement. Furthermore, these qualitative studies did not examine home-based involvement, school-based parental involvement, and home-school communication that are examined in the current study.

2.3.2. *Additional Family Status Characteristics*

Additional family status characteristics that were considered in the present study include parent

age, gender, level of education, family status (family structure, family type), and housing status.

2.3.2.1. Parent Age

Studies examining the effect of parents' or guardians' age on their children's academic achievement are rare. However, it may be speculated that the effect of a parent's age on a child's achievement depends on the beliefs the parent holds. Some parents may prioritize culture (traditional beliefs and myths) and give education the less importance (this is practiced on a large scale in some communities in Africa). Traditional beliefs may include practices such as female genital mutilation (FGM) and early marriages. In such cases, children belonging to traditional parents may end up achieving poorly in education. In a qualitative study, Kanu (2008) noted cultural differences in gender role expectations among African refugee families living in Canada. It was noted that parents pressurized their female children to quit school and get married. Other parents were reported to have forced their female children to return to their homeland to practice FGM rituals (Kanu, 2008). Most modern parents give priority to education and may not adhere to such cultural and risky practices.

In one study in Kenya, Nyambedha, Wandibba, and Aagaard-Hansen (2003) studied children who lived with older parents and guardians. They noted that older parents and guardians were less zealous on following children who went off track in order to rectify them. They were seen to view such children as troublesome and they deserved to be neglected. Even if the children were sent out of school on disciplinary grounds, the older parents and guardians were reluctant in following up on such cases with the school administration. It is possible that such an attitude by older parents and guardians will eventually affect negatively students' academic achievement.

Additionally, Nyambedha et al. (2003) reported that children who were orphaned and lived with relatives who were older resorted to child labor for a living. The children were noted to skip school and the schools in turn compelled the children to repeat classes, thus jeopardizing their chances of completing basic education, let alone succeeding in school. In particular, Nyambedha et al. (2003) noted that the situation was the same whether a child lived with elderly guardians or elderly parents. In fact, the study observed that a 15-year old child who lived with a 62-year old father had taken on adult roles of looking for casual work to earn some money to buy food and cook for his 62-year old father. It was noted that single older parents were unable to care for children and that is when role reversals are frequent. This suggests that age of family members can affect students' academic progress.

2.3.2.2. Parent Gender

Research examining the effect of parent gender on academic achievement has revealed mixed findings and mostly focused on single-parent families (e.g., Lee & Kushner, 2008; Peterson & Zill, 1986; Powell & Downey, 1997). Peterson and Zill (1986) reported that children living with opposite-gender parents exhibited more behavioral problems than children living with same-gender parents. In addition, Radin and Russell (1983) argued that living with an opposite-gender parent impairs academic achievement. This may also be true of living with same or opposite gender guardian.

In a longitudinal study of family, gender, and educational attainment in Britain, Scott (2004) found that while girls in secondary school are adopting their gender role identity with respect to their becoming mothers, a role identity learned from their mothers, boys do not experience a

converse role identity of becoming fathers. It is argued that in the absence of a mother's role model in the home, girls in single-father families may not adopt the same maternal aspirations during secondary school; they may delay that until later when they have college or career experience, a pattern more similar to that of boys.

Studies examining the relationship between a parents' or guardians' gender and refugee students' academic achievement are rare. However, there are studies that suggest gender differences in parenting style may affect children's academic achievement. For example, Kanu (2008) noted that male African parents in Canada felt they had lost their manhood in that they were not allowed to discipline their wives and children. In fact, male parents perceived themselves as having lost parental authority and felt that the Canadian constitution valued children first, women second, dogs (pets) third, and men came last. Such a feeling of frustration suggests that male parents may find it difficult to participate in their children's education, which may then affect the children's academic achievement.

2.3.2.3. Parent Level of Education

Literature has consistently shown that a parent's level of education is important in predicting children's achievement (e.g., Haveman & Wolfe, 1995). Several studies have demonstrated an association between parents' level of education and students' academic achievement. For example, using a sample of low-income minority families, Halle, Kurtz, and Mahoney (1997) found that mothers with higher education had higher expectations for their children's academic achievement and that these expectations were related to their children's subsequent achievement in math and reading. Similarly, using US Census data from 1960, 1970, and 1980, Oreopoulos,

Page, and Stevens (2006) reported that an increase in parental education of one year decreases the probability of a child repeating a grade by between two and seven percentage points.

2.3.2.4. Family Structure

Decades of changing rates in marriage, divorce, remarriage, cohabitation, death, and even immigration in the world today are among factors that have forced children to live in diversified family contexts (Brown, 2006). In the African context, circumstances robbing children of one or both of their parents include war resulting from civil or tribal clashes, HIV/AIDS, and accidents. These have resulted in a declining percentage of children living with both biological parents and a growing percentage living in a wide variety of non-two-biological-parent (referred to as alternative and including guardian households) family structure. In Africa, children who have no parents end up living with other relatives such as grand parents or guardians who may or may not have any blood relationship with the children (Nyambedha et al., 2003).

Researchers have compared children's educational achievement between children living with both biological parents and those living in alternative households (e.g., Astone & McLanahan, 1991; Downey, 1995). Using five waves of panel data from 8,008 children, Sun and Li (2011) compared children's academic performance growth curves from Kindergarten through fifth grade and found that children in non-disrupted two-biological-parent and non-disrupted step-parent households consistently made greater progress in their math and reading performance over time than children in disrupted alternative families with multiple transitions. Kimani, Mutua, Chesire, and Chebet (2012) examined differences in academic achievement between children living with relatives (guardians) and those living in professional institutions of care. They found that

children living in institutions of care were doing better academically than those who were living with relatives (guardians). They argued that differences in academic achievement could be attributed to mistreatment of children by guardians and a lack of resources to support the orphaned children who lived with guardians. They pointed out that guardians could mistreat male children mostly because boys were viewed as intruders who came to take away inheritance from their guardians' children. This was seen to happen mostly in households where children living in guardian houses did better in school subjects than their guardians' own children.

Researchers agree that growing up in various alternative family structures can have negative educational consequences. For example studies that compared children living in two-biological-parent households with those living in single-parent households found that the latter have exhibited lower levels of academic achievement (Hofferth, 2006; Schiller, Khmelkov, & Wang, 2002), and had lower chances of graduating from high school and attending college (Ermisch & Francesconi, 2001). In the African context, children who live with relatives have been found to perform worse than those who live with their parents. For example, Nyambedha et al., (2003) reported that children who were orphaned and lived with relatives who were old resorted to child labor for a living. The children were noted to skip school and the schools in turn compelled the children to repeat classes, thus jeopardizing their chances of completing basic education, let alone succeeding in school. These findings suggest that family structure is important in explaining individual differences in academic achievement.

2.3.2.5. Housing Status

Researchers have found that housing status is related to students' academic achievement, and that residence in poor neighborhoods affects academic achievement negatively (Brooks-Gunn, Guo, & Furstenberg, 1993; Garner & Raudenbush, 1991). For example, while controlling for student ability, family background, and schooling in Scotland, Garner and Raudenbush (1991) found that residence in deprived neighborhoods was a key determinant of educational achievement. Similarly, Cassen and Kingdon (2007) used a national student database at the state secondary school leaving age of 16 years in England and reported that low achievers were commonly found in poor urban settings. In Kenya, Ejakait, Mutisya, Ezeh, Oketch, and Ngware (2011) compared academic achievement for students residing in two poor informal settlements (poor housing) with academic achievement for students residing in two formal settlements (good housing). They reported that students from the two informal rural settlements scored lower points in the National Examination than students from the two formal urban settlements. Similarly, Ngware, Ezeh, Nderu, and Epari (2008) found that students in informal settlements scored 38 points lower than their peers in formal settlements. Hungi and Thuku (2010) examined students' factors that contributed to academic achievement in Kenya and found that housing status was a contributing factor. They reported that students who lived in better quality houses were estimated to achieve better in mathematics and reading than students living in lower quality houses.

2.4. Teacher Characteristics

According to Bronfenbrenner's (1979, 2005) bio-ecological theory, individuals' development and achievements are influenced by the microsystems and mesosystems within which they

operate. In the case of students, their success depends on the support they receive from schools as well as from their home and family. Teachers play a crucial role in influencing students' academic achievement. Although many teacher characteristics may predict students' achievement, the current study limited itself to teacher expectations, teachers' self-efficacy, and additional teacher status characteristics (age, gender, experience, and qualifications).

2.4.1. *Teacher Expectations*

Teacher expectations can be defined as teachers' predictions about how students are likely to achieve academically over time (Brophy, 1983; Cooper & Good, 1983), as teachers' judgments about individual students regarding their academic potential (Riley, 2012), or as inferences that teachers make about future behavior or academic performance of their students based on what teachers know about their students (Good, 1987; Paterson, 2007).

Research on teacher expectations can be traced back to Merton's (1948) description of the "self-fulfilling prophecy" as well as Rosenthal and Jacobson's (1968) study that examined the "Pygmalion effect" in an attempt to demonstrate the power of teacher expectations on students' outcomes. The term "self-fulfilling prophecy" was coined by Merton (1948) to describe a false definition of a situation resulting in a new behavior that makes the originally false thought come true. In the self-fulfilling prophecy, Merton (1948) referred to how expectations potentially produced and maintained ethnic and racial discrimination. While Merton did not specifically address teacher expectations and student achievement, his theory inspired researchers to consider the influence of various factors, such as race and ethnicity, on the formation of teacher expectations of students. In his discussion of the concept of self-fulfilling prophecy, Wilkins

(1976) contended that if we evaluate other people appropriately and continually re-evaluate our expectations of them, then there would be no need to discuss self-fulfilling prophecies. However, Wilkins (1976) suggested that instead of eliminating self-fulfilling prophecies, we should create positive self-fulfilling prophecies. Applying this suggestion to Merton's definition, if people embrace false positive conceptions of a person or situation, they will behave in a way that makes this positive conception come true.

The term "Pygmalion effect" was borrowed from a play by George Bernard Shaw called Pygmalion in which a professor's high expectations of a lower-class girl had a considerable impact on her educational performance. Similar to self-fulfilling prophecy, the term refers to the idea that people live up to what is expected of them (Rosenthal & Jacobson, 1968). Since Rosenthal and Jacobson's (1968) seminal study of the Pygmalion effect, many researchers have attempted to clarify and highlight the importance of the influences of teacher expectations on students' achievement (e.g., Jussim & Eccles, 1992; Rubie-Davies, 2006, 2007; Rubie-Davies, Hattie, & Hamilton, 2006; Trouilloud, Sarrazin, Martinek, & Guillet, 2002; Turner & Patrick, 2004; Zhang, Haddad, Torres & Chen, 2011). The self-fulfilling prophecy theory manifests in three steps. First, teachers form different expectations for their students; second, the expectations are communicated to students; and finally, teachers' expectations affect students' behavior and performance, either negatively or positively (Jussim & Eccles, 1992).

2.4.1.1. Formation of Teacher Expectations

The first step in the manifestation of the self-fulfilling prophecy is the formation of teacher expectations of students. Several studies have indicated that teachers use information related to a

group of individual students' characteristics to form expectations (e.g., Hornstra et al., 2010; Keogh, 2000; Rubie-Davies, 2006, 2007). These characteristics include ethnicity, race, and minority status (Benner & Mistry, 2007; Ferguson, 2003; Jussim, Eccles, & Madon, 1996; McKown & Weinstein, 2008; Tenenbaum & Ruck, 2007), social class (Downey, & Pribesh, 2004; Rubie-Davies, Hattie, & Hamilton, 2006), stereotypes, diagnostic labels, and group labels (Fazio, & Olson, 2003; Hornstra et al., 2010; Jussim, Nelson, Manis, & Soffins, 1995; Jussim, Palumbo, Chatman, Madon, & Smith, 2000; Paterson, 2007), gender (Clifton, 1981; Harris, Rosenthal, & Snodgrass, 1986; McKnown & Weinstein, 2002), appearance (Obiakor, 1999; Gutman & Midgley, 2000), and prior achievement (Jussim, 1989; Rolison & Medway, 1985).

For example, teachers' expectations for ethnic minority students, students from low SES backgrounds, and female students have been found to be lower compared to their white, middle class, male counterparts (Baron, Tom, & Cooper, 1985; Gill & Rynolds, 1999; Jussim et al., 1996; McKnown & Weinstein, 2002; Tenenbaum & Ruck, 2007). Baron et al. (1985) contended that differences in average group performance among students from diverse ethnic backgrounds tend to influence teacher expectations. This argument suggests that a student's race or ethnicity tends to give rise to a teacher's bias, creating stereotypical expectations (Kawakami, Young, & Dividio, 2002), rather than allowing the expectations to develop naturally. In fact, it has been argued that as students flow into classrooms on the first day of school, they are assigned not only lockers, agendas, and notebooks, but also stereotypical expectations (Green, 2010).

Several studies in the Western countries, such as the United States (Harlin, Sirota, & Bailey, 2009), the United Kingdom (Strand, 2012), Canada (Riley, 2012), Australia (Jacobs & Harvey,

2009), and New Zealand (Rubie-Davies, 2006), have found that teachers hold lower expectations for ethnic minority students than for non-minority students. Differences have been found in teacher referrals such as the need for special education, assignment to gifted and talented programs, disciplinary cases, and assistance with the use of speech (Tenenbaum & Ruck, 2007). For example, Tenenbaum and Ruck (2007) found that teachers had more positive expectations and used more positive speech toward European American children than toward ethnic minority children. In addition, research has demonstrated that teachers rate White students more highly on academic attainment than African-American and Hispanic students (Wigfield, Galper, Denton, & Seefeldt, 1999). African-American students have been rated lower on academic scales as well as in ability to make friends than their White-American counterparts (Wigfield et al., 1999). Further, teachers tend to rate African-American students unfavorably on measures of personality and classroom behavior, motivation to learn, and general classroom performance, and they tend to hold lower academic expectations for these students (Pigott & Cowen, 2000). Teachers have also been found to hold low expectations for Latino students (Tenenbaum & Ruck, 2007). In fact, it has been argued that low expectations of ethnic minority students are a major factor in their poor academic achievement (Pellegrini & Blatchford, 2000).

Diagnostic labels such as learning disabled, developmentally delayed, dyslexic, or ESL student (Hornstra et al., 2010; Tsiplakides & Keramida, 2010) and stereotypic and group labels such as the refugees, the Maori, the Black-Americans, the Aboriginal students have been examined in relation to teacher expectations (Rubie et al., 2006). Findings have indicated that teachers tend to have lower expectations of students from these groups (de Boer, Bosker, & van der Werf, 2010; Rubie, 2006, 2007). Labeling seems to be a common occurrence that is composed of information

processing (Koonce, Cruce, Aldridge, Langford, Sporer, & Stinnet, 2004) and social categorization (Armstrong, 2002). In reality, both negative and positive labeling exists and labels may have negative or positive effects on the individuals that are labeled. However, labeling can turn into stigmatization (Hinshaw, 2005) and be associated with lowered expectations for the individuals who are labeled (Caroll & Lepucci, 1978; Hornstra et al., 2010). For example, there are a disproportionate number of minority students in special education (Mandell, Davis, Bevans, & Guevara, 2008). This may be as a result of the labels and stereotypes placed on the individuals and the differential treatments that they lead to. Children as young as 6 years of age are capable of perceiving differential treatment of students (Hepperlen, Clay, Henly, & Barke, 2002), especially of those who are labeled. Low expectations and negative stereotypes are said to result from the label and not from actual behavior (Koonce et al., 2004). Labels also increase the risk of lower self-esteem, poor adjustment, and peer rejection (Fernald & Gettys, 1980) that may eventually affect students' academic achievement indirectly. As pointed out by Hauser-Cram, Sirin, and Stipek (2003), students who belong to stigmatized groups are both more prone to low teacher expectations and more likely to have low expectations of themselves, resulting to a self-fulfilling prophecy of low academic achievement.

2.4.1.2. Communication of Expectations

The second step in the self-fulfilling prophecy is teachers' communication of expectations to students. Research has found that when teachers have high expectations of a student, they expect a higher level of performance and give out more praise when the expected behavior occurs. With low expectations of a student, the teacher may be content with accepting a poorer performance

and give little praise (Rubie-Davies, 2010) or give praise for success for reasonably simple tasks. Such strategies may lead to a negative effect on the students' self-esteem, motivation, and morale (Babad, 1995); students may consider this to be an indication that the teacher has very little confidence them and hence expects very little from them (Thompson, 1997).

Teacher expectations, especially negative expectations, are often expressed through differential treatment and non-verbal cues (Weinstein, Marshall, Sharp, & Botkin, 1987). Teacher behaviors, conscious or unconscious, that express low teacher expectations for students include offering fewer opportunities to students to respond in class, providing sarcastic praise, demanding less effort of students, calling on students less, seating the students at the back of the classroom, and providing less accurate and detailed feedback (Brophy & Goody, 1974).

2.4.1.3. The Effect of Teacher Expectations on Students' Outcomes

The third and final step in the self-fulfilling prophecy is the impact of teacher expectations on students' behavior and achievement. Researchers concur that teacher expectations, whether negative or positive, do have an effect on student outcomes. In fact, a large body of research supports the idea that teacher expectations can produce a myriad of effects on student outcomes (e.g., Benner & Mistry, 2007; Brattesani, 1984; Brattesani, Weinstein, & Marshall, 1984; Clifton, & Bulcock, 1987; Ferguson, 2003; Mistry et al., 2009; Rubie-Davies, 2006; Trouilloud et al., 2002; Weinstein, 2002), both directly and indirectly. For example, Brattesani (1984) noted that students whose teachers held high classroom-wide expectations made large gains in reading over the school year whereas students whose teachers held low class-wide expectations made fewer gains. Some researchers suggest that negative expectations lead to more powerful self-fulfilling

prophesies than positive expectations (Brophy, 1983).

Research has found that teachers' expectations can also affect students' GPA (Mistry et al., 2009; Smith, Jussim, & Eccles, 1999). For example, Smith et al. (1999) reported effects of teacher expectations assessed during middle school on multiple indicators of students' high school academic performance on standardized tests scores. Clifton and Bulcock (1987) illustrated that teachers' academic and effort expectations at Grades 9 and 10 affected teacher grade assignments on teacher-made tests. Teachers' academic expectations also affected student achievement on standardized English and mathematics tests, although to a lesser extent than they did when assigning grades. Similarly, Muller (1998) revealed that teachers' expectations were of greater consequence in predicting student achievement gains and performance than were student expectations. Additionally, Muller showed that students' expectations were strongly influenced by expectations of teachers.

The effects of teacher expectations have been found to be significantly stronger for stigmatized groups of students, including ethnic minority and low achieving students, than for the general school population (Jussim & Harber, 2005). Teacher attitudes towards some students may underlie teacher expectations for such students and subsequently produce an indirect association between teacher attitudes and student achievement mediated by teacher expectations. In several experimental studies, group stereotyping has been found to influence the grading of students' essays and other scholastic assignments (e.g., Fazio & Olson, 2003). For example, when teachers were led into believing that a particular essay was written by an ethnic minority student, the essay was graded more negatively (Fazio & Olson, 2003).

It is also possible that students from disadvantaged social groups are especially vulnerable to the negative self-fulfilling effect (Downey & Pribesh, 2004; Ferguson, 2003; Rubie-Davies, 2006). In one example, New Zealand teachers had lower expectations of Maori students than students of other ethnic groups due to the differences in their socioeconomic status. Although the Maori students' achievements were similar to other students' achievements at the beginning of the year, the Maori students made the least gains of all groups (Rubie-Davies, 2006), suggesting a self-fulfilling prophecy resulting from their teachers' low expectations. Similarly, Madon, Jussim, and Eccles (1997) found that low achieving students were more vulnerable to the self-fulfilling prophecies than high achieving students, and Brattesani (1984) noted that low expectations and teacher behaviors associated with them have a negative impact especially on students who have a prior history of low grades.

The few qualitative studies examining the effect of teacher expectations on refugee students in the West have suggested similar patterns as with expectations for other minority students discussed earlier. For example, Walker-Dalhouse and Dalhouse (2009) reported that teachers often sent home negative notes regarding the refugee students, possibly indicating negative or low expectations that teachers had of the refugee students. In the study, the parents expressed their concerns about teachers not caring for their children and having low expectations of their children because they were refugees. The parents were also concerned about the teachers' low expectations resulting from stereotypes about the academic inferiority of blacks because of students' skin color. These findings agree with findings of quantitative studies that teachers form their expectations based on students' characteristics such as skin color or appearance, gender, diagnostic labels, and stereotypes.

In a similar study, Tadesse, Hoot, and Watson-Thompson (2009) noted that African refugee parents believed that teachers had low expectations of their children and did not challenge their children enough. These results concur with the quantitative studies showing that teachers tend to treat students differently depending on whether they hold low or high expectations for such students. While qualitative research studies have not measured the relationship between teacher expectations and students' achievements, they suggest that teachers have low expectations, especially for students with limited language proficiency such as refugee students (Walker, Shafer, & Liams, 2004; Miller, 2009; Miller et al., 2005). This is mostly manifested in teacher's negative attitudes towards these students, and the teachers seeing these students as a burden (Riley, 2012).

2.4.1.4. A Summary of the Impact of Teacher Expectations on Student Outcomes

It is clear that teachers' expectations exist, and are mostly communicated in the form of treating students differently as per the beliefs that teachers hold regarding individual students or even the entire class. Research has indicated that vulnerable students end up living up to their teachers' expectations (Weinstein, 2002). Students are likely to form their own performance expectations on the basis of their observations of the differences in the ways teachers respond to them and to others. With continuous repetition of differential practices, students begin to personalize their teachers' expectations-associated messages. This personalization, in turn, can have serious consequences on the students' socio-emotional adjustment and academic performance. Student awareness of teachers' low expectations can lower students' motivation, morale, and effort (Brophy & Good, 1974), and thus lead to poor student achievement.

Studies conducted in the Western countries, such as the United States (Harlin et al., 2012), the United Kingdom (Strand, 2012), Canada (Riley, 2012), and New Zealand (Rubie-Davies, 2006), have suggested that teachers hold low expectations for ethnic minority students in general. Whether similar effects of teacher expectations exist in low-income countries has not been established. In addition, existing studies have not specifically examined the effects of teacher expectations on refugee students' academic achievement, which is what the current study proposed to do. The current study examined the effect of teacher expectations on refugee students' academic achievement in Kenya.

2.4.2. *Teachers' Self-efficacy*

Bandura's theory identified teacher self-efficacy as a type of self-efficacy that is the product of a social cognitive process in which people form beliefs about their own capacity to perform at a given level of competence (Henson, 2001; Goddard, Hoy, & Hoy, 2000). Some authors have defined teacher self-efficacy as a teacher's belief in his or her capability to organize and execute courses of actions required to successfully accomplish a specific teaching task in a particular context (Tschannen-Moran, Hoy, & Hoy, 1998). Specifically, Tschannen-Moran et al. (1998) defined teacher self-efficacy as a teacher's judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated. Teacher self-efficacy may include teacher beliefs in maintaining an organized classroom conducive to learning, self-belief in instructional techniques in different knowledge domains, soliciting resources, and counteracting social influences that undermine students' academic pursuits (Bandura, 1997).

2.4.2.1. Dimensions of Teachers' Self-efficacy

According to Ashton and Webb (1986), teacher self-efficacy consists of two dimensions: personal teaching efficacy and general teaching efficacy. These two dimensions are different and vary in scope and degree (Ashton & Webb, 1986). Personal teaching efficacy refers to teachers' personal evaluation of their own teaching abilities. Research suggests that teachers' selection of classroom management and instructional techniques, including the use of time and questioning techniques, are influenced by their own perceptions of their teaching capability (Gibson & Dembo, 1984). Teachers who tend to be preoccupied with their own incompetency may distrust their ability to motivate certain students. In addition, teachers with lower personal teaching self-efficacy may allow such students to ignore classroom rules and remain off-task during instruction. They will fail to encourage those students in the same way they encourage other students in the class. Teaching effectiveness eventually drops as teachers continue to worry about their personal competence (Ashton & Webb, 1986), thus negatively affecting students' performance.

General teaching self-efficacy refers to expectations that the teacher can help students learn given the extent to which students are capable of learning what the teacher has to teach (Bandura, 1997). Individual teachers who have strong general teaching self-efficacy believe they are capable of positively influencing students' performance. These individuals may choose challenging activities and try harder when faced with challenges. Such teachers are not easily distracted and derive pleasure in their accomplishments when their work is completed (Ashton & Webb, 1986). They tend to believe that all students can learn if suitable conditions for learning

can be provided (Tschannen-Moran & Hoy, 2001).

The two dimensions of teachers' self-efficacy are different because personal teaching efficacy evaluates a teacher's sense of his or her own effectiveness and general teaching efficacy looks at a teacher's beliefs about the general relationship between teaching and learning. For example, a teacher may be confident of his or her own ability to teach (personal teaching efficacy) but unsure of his/her students' ability to grasp the materials and learn (general teaching efficacy). Allinder (1995) argued that a teacher may have a high sense of personal teaching efficacy with regard to a particular content area (such as a believe that he or she can teach students how to divide in mathematics) while demonstrating a low sense of general teaching efficacy (such as a teacher believing that no matter how hard he or she tries to teach a student, that particular student will be unable to succeed because of his or her home environment).

2.4.2.2. The Influence of Teachers' Self-efficacy on Students

Several positive outcomes have been associated with teachers' high sense of self-efficacy. These include student achievement (Anthony & Kritsnosis, 2007; Ashton & Webb, 1986; Bandura, 1997, Midgley et al., 1989; Zimmerman, 1995), classroom management (Giallo & Little, 2003), student motivation (Nolen, Ward, Horn, Campbell, Mahna, & Childers, 2007), and responsibility for student learning (Darling-Hammond, Chung, & Frelow, 2002). Studies in the area of student achievement have indicated that teachers with high sense of self-efficacy take more risks and set higher standards for themselves and their students, leading to higher academic achievement among learners (Darling-Hammond et al., 2002). For example, Navidinia, Mousavi, and Shirazizade (2009) investigated the association between teachers' self-efficacy and student

achievement and reported a statistically significant positive correlation between teachers' self-efficacy and students' achievement. The study indicated that teachers who have a strong sense of self-efficacy about their capabilities can motivate their students to succeed in education.

Teacher self-efficacy has also been shown to be related to many other behaviors that have the potential to impact student achievement. For example, there is evidence that teacher self-efficacy is strongly related to teachers' adoption of innovations (Gusky, 1988) and classroom management strategies (Gibson & Dembo, 1984) that enhance student motivation and self-esteem, which then can lead to academic success of students.

2.4.2.3. Teacher Self-efficacy and Instructional Strategies

Research indicates that teachers' self-efficacy beliefs are good predictors of how effective their instructional strategies will be, how they view the educational process, and how effective they will be at influencing positive student outcomes (Anthony & Kritsonis, 2007). For example, in a study completed by Gibson and Dembo (1984), a high correlation was found between teachers' sense of efficacy and their persistence in the presentation of lessons, feedback, and supported scaffolding for weaker students, which in turn affected positively students' performance. Gibson and Dembo (1984) reported that teachers with low self-efficacy easily gave up when students could not answer questions quickly and criticized students for their failures. On the contrary, teachers with high self-efficacy were reported to spend more time on academic activities, guide unsuccessful students, appear to be less critical, and encourage students' accomplishments. It was also noted that teachers with low self-efficacy tended to spend more time in nonacademic activities and made use of less effective techniques to guide students to correct responses.

Teachers with a high sense of self-efficacy are less likely to criticize students following incorrect responses, more likely to persist with students in a failure situation, and more likely to divide a class for small group instruction as opposed to instructing the class as a whole. Those teachers are more likely to declare regular education as the appropriate placement for students having a learning problem, a behavior problem, or both (Tschannen-Moran et al., 1998). In sum, a teacher's self-efficacy can influence the teaching strategies that a teacher employs in the classroom, which in turn can affect students' outcomes.

2.4.2.4. Teacher Self-efficacy and Classroom Management

If a teacher believes that he or she is capable of managing his or her classroom and conducting meaningful lessons, he or she will be more likely to do just that (Ritchie, 2006). Compared to teachers with lower self-efficacy beliefs, Goddard et al. (2004) reported that teachers with strong self-efficacy are highly efficient in using classroom management skills. Those teachers tend to employ classroom management strategies that are more organized, better planned, student-centred and humanistic, and more receptive to student ideas (Anthony & Kritsonis, 2007). Teachers with limited classroom management skills and low rates of praise often have classrooms with higher rates of aggression, which in turn can maintain behavior problems (Shernoff & Kratochwill, 2007).

The relationship between teachers' classroom management and self-efficacy beliefs is likely cyclical, such that classroom management behavior likely affects one's beliefs on his or her self-efficacy (Henson, 2001). Gibson and Dembo (1984) conducted an observational study to investigate the differences in classroom management between teachers with high self-efficacy

and those with low self-efficacy. They reported that teachers with low self-efficacy easily gave up when students could not answer questions quickly and criticized the students for their failures. Conversely, teachers with high self-efficacy spent more time on academic activities, tended to guide unsuccessful students, and tended to be less critical and more encouraging of their accomplishments.

Similarly, Henson (2001) indicated that more efficacious teachers use positive strategies for classroom management. Furthermore, Chambers, Henson, and Sienty (2001) conducted a study aimed at investigating the relationship between teacher personality type and personal self-efficacy and teacher beliefs concerning control in classroom management. The result revealed that personal teaching efficacy was a stronger predictor of instructional classroom management than personality type. Woolfolk and Hoy (1990) suggested that prospective teachers' beliefs about student control would impact how they facilitated their classroom. They found that teachers with high self-efficacy were more humanistic in how they viewed students and held a lower student control ideology.

Main and Hammond (2008) examined pre-service teachers' beliefs about effective behavior management strategies and found that respondents who reported high levels of self-efficacy in behavior management reported frequent use of effective strategies in classroom management behavior. Along with the findings of this study, Giallo and Little (2003) reported that teachers with high classroom management self-efficacy were more effective in dealing with severe and unmanageable behaviors of their students than teachers' with lower sense of self-efficacy in student behavior management. Additionally, Tschannen-Moran et al. (1998) reported that a

teacher's sense of self-efficacy predicts their willingness to work with students who are experiencing difficulties rather than referring the students to special education. Among regular education teachers, those with higher teaching self-efficacy are more likely to declare regular education as the appropriate placement for students having a learning problem, a behavior problem or both.

2.4.2.5. Teacher Self-efficacy and Student Engagement

Student engagement is a fundamental component of students' success in the academic subjects. Teachers with a high sense of self-efficacy ensure that their students are engaged in learning (Skinner & Belmont, 1993). These teachers are less critical of students who make mistakes and work longer with students who have difficulty mastering the material (Ashton & Webb, 1986) and hence get students engaged. Additionally, teachers with a high sense of efficacy devote more classroom time to academic learning, provide assistance to students who have difficulty, and reward students for their achievements. This way, students are likely to be motivated to learn and to stay engaged on tasks (Wolters & Daugherty, 2007). Research that has examined engagement versus disaffection in school has found that a teacher's behavior plays a crucial role in determining whether or not students will be engaged in classroom activities (Skinner & Belmont, 1993; Wolters & Daugherty, 2007). Engagement includes both behavioral and emotional components; children who are engaged in learning are more likely than those who are not to show sustained behavioral involvement in learning activities accompanied by positive emotional tone. Teachers with high sense of self-efficacy are more likely to guide students in initiating action when given the opportunity, and exerting intense effort and concentration in the

implementation of learning tasks. Once students are engaged in learning, they show positive emotions during ongoing action, including enthusiasm, optimism, curiosity, and interest, and this can affect positively their academic achievement.

2.4.2.6. Teacher Self-efficacy and Refugee Students

Studies examining the relationship between teachers' self-efficacy and refugee students' academic achievement are rare. However, some studies have examined this relationship with other at-risk students such as the English Language Learners (ELLs) and other minority students. For example, Karabenick and Noda (2004) found that teachers who displayed more positive attitudes towards having ELLs in their classrooms held higher self-efficacy beliefs for teaching these students compared to teachers who held less positive attitudes towards having ELLs in their classes. Additionally, Siwatu (2007) revealed that the pre-service teachers were more efficacious in their ability to help ELLs feel like important members of the classroom than they were in their ability to communicate with ELLs. In a study of teachers of refugee students, Szente, Hoot, and Taylor (2006) noted that "…teachers often feel overwhelmed to teach academic content to refugee children while not neglecting their responsibility to teach the other 20-25 children in their class" (p. 18). This is likely to impact such students' academic achievement.

2.4.2.7. Summary of Teachers' Self-Efficacy

Numerous studies have highlighted the important role that teachers' self-efficacy plays in academic achievement, both directly and indirectly as it impacts teachers' behaviours and

practices (Abu-Tineh, Khasawneh, & Khalaileh, 2011; Bandura, 1986, 1997; Caprara, Barbaranelli, Steca, & Malone, 2006; Cheung, 2008; Coladarci, 1992; Garcia, 2004; Gibson & Dembo, 1984; Henson, 2001; Klassen & Chiu, 2010; Navidinia et al., 2009; Pajares, 1992; Wolters & Daugherty, 2007). However, such studies have mostly been conducted in the West. Besides, studies examining the relationship between teachers' self-efficacy and refugee students' academic achievement are rare especially in low-income countries. The current study examines the extent to which teachers' self-efficacy predicts refugee students' academic achievement in Kenya, a low-income country.

2.4.3. *Additional Teacher Variables*

Additional teacher variables that were considered in the present study include teacher age, gender, qualifications, and experiences.

2.4.3.1. Teacher Age

Studies examining the effect of teachers' age on students' academic achievement are rare. However, a few studies have reported both direct and indirect effects (e.g., Bunch, Robinson, Edwards, 2012; Kimani, Kara, and Njagi, 2013). Bunch et al. (2012) examined the level of self-efficacy of secondary agricultural education teachers regarding their use of the interactive whiteboard (IWB) in classroom teaching to engage students. Their study revealed that as age and years of teaching experience increased, levels of self-efficacy and outcome expectations decreased. They noted that younger and less experienced teachers were more efficacious and had higher expectations regarding the use of IWBs than the older and more experienced teachers.

One recent study that examined the direct effect of teacher age on student academic achievement was conducted in Kenya by Kimani et al. (2013). Kimani and colleagues found no relationship between teacher age and student academic achievement.

2.4.3.2. Teacher Gender

A substantial amount of research has demonstrated differences between male and female teachers in their perception and treatment of male versus female students (Krieg, 2005). Researchers evaluating the impact of assignment to a same-gender teacher have reported mixed results (e.g., Akiri & Ugborugbo, 2008; Bettinger & Long, 2005; Dee, 2005, 2007; Kimani et al, 2013; Winters, Haight, Swaim & Pickering, 2013). For example, Dee (2005) studied the effect of having a teacher of the same sex in 8th grade in US middle schools. In a later study, using data from the National Educational Longitudinal Study, Dee (2007) found that assignment to a same-gender teacher significantly improved student achievement. Using within-student variation across subjects as the dependent variable, he found that having a same-sex teacher has considerable positive impacts, both on test scores, students' interest in the subject, and teacher assessments of students. Winters et al. (2013) found no statistically distinguishable relationship between same-gender teacher assignments and student math or reading achievement in elementary school. However, they reported a statistically significant relationship between being assigned to a female teacher and student achievement in middle and high school. Carrington, Tymms, and Merrell (2008) examined British data from the Performance Indicators in Primary School (PIPS) project and found no teacher gender effect. Similarly, using data on upper-secondary school students and their teachers from Sweden, Holmlund and Sund (2008) found no

teacher gender effect on students' academic achievement. In a recent study in Kenya, Kimani et al. (2013) found no teacher gender effect on students' academic achievement.

2.4.3.3. Teacher Qualifications

Studies examining the association between teacher qualifications and students' outcomes have produced mixed findings. Some studies have indicated positive effects of advanced degrees on student achievement (Adeyemi, 2010; Betts, Zau, & Rice, 2003; Wayne & Youngs, 2003; Yara & Wanjohi, 2011), while others have reported negative or no effects (Ehrenberg & Brewer, 1994; Rowan, Correnti, & Miller, 2002). Rowan et al. (2002) found no effect of either mathematics certification or advanced degrees in mathematics on students' mathematics achievement. Goldhaber and Brewer (2000) examined data on the postsecondary degrees and certification status of teachers and their students' academic achievement in mathematics and science and reported a positive relationship between teachers' degrees and student performance in mathematics. They also found that students whose teachers were certified in mathematics but did not hold a postsecondary degree in mathematics did not perform as well as students whose teachers held a postsecondary degree in mathematics, suggesting that teachers' qualifications do matter in students' achievement. Kimani et al. (2013) examined the effect of teachers' qualifications on students' academic achievement and found that teachers' professional qualifications had no significant association with students' academic achievement.

2.4.3.4. Teachers' Experience

Years of teaching experience have been examined with some studies noting that student

achievement increases with teachers' years of teaching experience (e.g., Adeyemi, 2010; Greenwald, Hedges, & Laine, 1996; Gorman, 2005; Kaya & Rice, 2010; Yala & Wanjohi, 2011) while others finding no relationship (e.g., Kimani et al., 2013). Greenwald et al. (1996) examined data from 60 studies and reported a positive relationship between years of teaching experience and students' test scores. Additionally, Hawkins, Stancavage, and Dossey (1998) noted that students taught mathematics by teachers with more than five years of teaching experience were more likely to perform better on the NAEP mathematics assessment than students taught by teachers with five or fewer years of experience. Similarly, Kaya and Rice (2010) found a significant association between teachers' experience and students' science scores in Japan, with students achieving 0.40 points higher with each one year increase in their teachers' experience. In Kenya, Kimani et al. (2013) examined the effect of teaching experience on students' academic achievement and found that teaching experience had no significant relationship with students' academic achievement.

Teachers' years of teaching experience may not necessarily affect students' academic achievement directly but may affect other teacher characteristics that may in turn affect students' academic achievement. For example, studies have reported differences in teachers' self-efficacy explained by years of teaching experience. Wolters and Daugherty (2007) used a large on-line sample of teachers from the United States and reported modest effects of experience on self-efficacy for instructional strategies and self-efficacy for classroom management. Similarly, Klassen and Chiu (2010) found a relationship between teachers' self-efficacy and teaching experience although the relationship was non-linear.

2.5. School Variables

A school environment has the capability of facilitating or hindering students' academic achievement through its structure, staffing, organization, resources, and school climate. Numerous studies have examined the relationship between school characteristics such as the type of school, location, size, and students' academic achievement (Carbonaro, 2005; Rumberger & Parlady, 2005). There are a number of school characteristics that are thought to predict students' academic achievement, including the type of school and the location of the school. However, the current study limited itself to the school location.

2.5.1. *School Location*

Researchers examining rural and urban differences in students' academic achievement have reported mixed findings. For example, using data from the National Longitudinal Study of 1988 in the U.S., Fan and Chen (1999) found that students from rural schools outperformed their urban counterparts in math, science, reading, and social studies. It has been argued that schools in rural settings may perform better because they tend to be smaller and class sizes are smaller hence paving way for teachers to pay attention to each student. In contrast, Zhang (2006) found that rural students lagged behind their urban counterparts in reading due to lower socio-economic status of families of rural students. Additionally, in an analysis of 24 industrialized countries participating in the Economic Cooperation and Development study of the literacy performance of 15-year old students, Williams (2005) found that rural students scored significantly lower in math than students in urban and medium sized communities in 14 countries. For the most part, the difference in academic achievement between rural and urban schools may be attributed to

differences in SES of families, school size, supervision of teachers, availability of instructional materials and human resources, and quality of teachers. For example, in Kenya, due to the distance between the schools and the educational offices and the lack of funding to travel to these schools, most rural schools are rarely visited by school inspectors or quality assurance officers who are in charge of monitoring and evaluating teaching. Consequently, teachers in rural schools are less likely to get much needed supervisory advice, which is particularly needed given the finding that rural schools, in contrast to urban schools, tend to have untrained or unqualified teachers (Mulkeen, 2008). Moreover, due to lack of attractive amenities (e.g., good houses, clean water, electricity), a significant proportion of teachers posted to rural schools either apply for transfer immediately or become habitual absentees. This makes it difficult for rural schools to keep classrooms staffed. Added to that is lack of facilities in most rural schools. For example, a 1988 World Bank report observed that, in contrast to urban schools, most rural schools in Africa were characterized by dilapidated buildings, missing or broken desks and chairs and a lack of good ventilation and sanitation facilities (World Bank, 1988). Further, in some rural schools, students sit on stones and learn under trees. The World Bank report noted these circumstances had the net effect of discouraging school attendance and hampering schools' efforts to enhance student learning.

Additionally, unlike students in urban centers who tend to concentrate on education, students in rural areas need to work on their parents' farms and spend time selling farm products. Further, it has been observed that rural schools face challenges relating to isolation, poverty and limited job opportunities for school leavers. Isolation denies rural schools the advantages of urban-based resources such as libraries, electricity, and access to technology that enhance learning (Capper,

1993). The poverty of many rural communities limits parents' ability to provide for their children and to supplement their children's education with resources at home that can sustain interest in learning in the absence of the teacher (Nyambedha et al., 2003). Bickel and Lange (1995) asserted that because of limited employment opportunities, learners in rural areas do not see any financial benefits to attending or succeeding in school. Consequently, most rural learners end up performing poorly on the Kenya Certificate of Primary Education (KCPE) and Kenya Certificate of Secondary Education (KCSE) exit examinations, thereby limiting their opportunity to move up the education ladder and enter a tertiary institution.

2.6. Summary of the Reviewed Literature

From the literature reviewed, it is evident that individual, family, teacher, and school level factors play important roles in the academic achievement of students with diverse backgrounds and needs. How students deal with the challenges they face in their endeavor to navigate the academic field can be affected by their own characteristics such as self-efficacy, family characteristics such as parental involvement in their children's education, and teacher characteristics such as teachers' self-efficacy and teacher expectations of the students.

It is important to note that literature reviewed above is a combination of studies that have been conducted in different settings using different methods. Research that has been conducted in different countries and settings, although informative, may not be applicable to other countries and settings. For example, the reviewed literature has focused exclusively on student populations in high-income countries and may not be applicable to populations of students in low-income countries. Additionally, the literature reviewed has focused on students other than the refugee

students. The studies have mainly focused on the general population of students, and while students of minority status, such as African-Americans, Latino, and Maori students, were included in some studies, no study has examined refugee students living in low-income countries. Consequently, the purpose of the present study was to investigate whether there are similar effects of student, family, teacher, and school factors on refugee students' academic achievement in Kenya that is considered to be a low-income country that educates large numbers of refugee students.

Chapter 3

Methodology

This chapter describes the methods employed in answering the research questions. The aspects discussed include the research design, locale and context, participant selection and characteristics, measurement of the independent and dependent variables, pre-testing of research instruments, additional variables, data collection procedure, logistical and ethical considerations, and, lastly, data analysis.

3.1. Research Design

The study used a quantitative non-experimental nested design in which 800 African refugee students and their parents/guardians were nested in 160 classrooms, which were nested in 40 schools. The schools were stratified by location and type of school such that there were 10 primary and 10 secondary schools in an urban setting, and 10 primary and 10 secondary schools in a rural setting. Urban schools refer to schools within Nairobi County that are commonly referred to as city council schools, while rural schools refer to schools on the outskirts of Nairobi (neighboring districts).

According to Gall, Gall, and Borg (2003), using a quantitative, non-experimental design gives the researcher the ability to analyze how variables, either individually or jointly, affect behavior. Additionally, Van Selm and Jankowski (2006) suggest that using a quantitative non-experimental survey is beneficial in terms of providing confidentiality to survey respondents who may feel safer revealing their thoughts in privacy. This design was therefore appropriate given that the

respondents in the study were refugee students, their parents/guardians, and teachers who may have wanted to reveal their thoughts in privacy.

3.2. Locale and Context of the Study

The study was carried out in urban and rural schools in Kenya, specifically in Nairobi County and its outskirts. Schools with high concentrations of refugee students in Grades 7 and 8 and Forms 1 and 2 (equivalent to high school grades 9 and 10) were selected to participate in the study. Grades 7 and 8 are located in primary schools while Forms 1 and 2 are located in secondary schools.

In Kenya, the medium of instruction is English and it is used right from pre-school. English has displaced other languages due to the status that it is given in African language policies. Kenya has a stringent system of education such that it is unlikely to find students who are not proficient in English in higher grades of learning. New students who do not speak English are normally admitted in lower grades regardless of their age. When older students are admitted to learn with younger students because of their limited English proficiency, they are given some responsibilities such as being appointed class prefects in order to enhance their self-esteem. Once these learners become proficient in English, they are allowed to skip some classes to catch up with peers of their age. Similarly, parents/guardians of refugee students are expected to communicate in English. Adult classes have facilitated the learning of English for adults who may have missed the opportunity to learn English at an early stage. Based on the above, all questionnaires were presented in English.

3.3. Participant Selection and Characteristics

The study used a combination of purposive and random sampling techniques to recruit the participants. According to Teddlie and Yu (2007), purposive sampling techniques involve selecting certain units or cases based on a specific purpose. Purposive sampling allows the researcher to use cases that have the required information with respect to the objectives of the study (Orodho, 2004). Specifically, in this study the selected population was comprised of refugee students, parents/guardians of refugee students, and teachers of refugee students.

Participating schools were selected from a compiled list of schools using the enrolment data obtained from the District Education Offices. Representatives of the Government of Kenya and non-governmental organizations such as Lutheran World Federation, Germany International Cooperation, Jesuits Refugee Services, World Vision, Tushirikiane Africa, and UNHCR, were requested to assist the researcher with information identifying school locations with refugee students or lists of the refugee students that they support in primary and secondary schools. Using the information provided, the researcher compiled a list of schools with a high number of refugee students. Only schools that follow the Kenyan curriculum of education and that had a high concentration of refugee students were eligible to participate in the study. This was to ensure that the researcher obtained a sample that was large enough for a quantitative research study. An average grade in a school in Kenya has about 160 students and an average class has about 40 students. The original list had 47 primary schools (22 urban schools and 25 rural schools) and 32 secondary schools (15 urban schools and 17 rural schools). Nine primary schools and six secondary schools were dropped from the initial list because they either had less than 4

classes in each grade level or they had less than 10 refugee students in each class. Random table numbers were then used to select 10 primary schools and 10 secondary schools from Nairobi County (urban schools) and 10 primary schools and 10 secondary schools from the neighboring districts (rural schools).

Within each selected school, the principal and class teachers at Grades 7 and 8 and at Form 1 and Form 2 assisted the researcher in preparing a list of refugee students for each participating class. Within each class, five refugee students were then randomly selected subject to the condition that only one student from a family was selected. This was done to avoid overburdening parents/guardians who were to complete questionnaires and to avoid confusion about what child they were completing the questionnaire for. Teachers were helpful in ensuring that only one student per family was selected. A parent or guardian of the family from which the participating student came from was automatically eligible for participation, thus the number of students was the same as the number of parents/guardians. The parent or guardian of each sampled student was the adult living in the home with the refugee student and who was (a) responsible for the student's well-being and educational needs and (b) had the most contact with the school on behalf of the refugee student.

3.3.1. *Students*

All students who participated in this study were refugees of African origin, and included 327 boys (40.9%) and 473 girls (59.1%) ranging in age from 14 to 25 years (M = 18.68; SD = 2.97). They were predominantly Somalis (43.3%), followed by Sudanese (30.6%), Congolese (9%), Rwandese (6.6%), Ethiopians (6.1%), Burundis (3.8%), and Ugandans (0.6%). The refugee

students were either living with a guardian (n = 451) or a parent (n = 349). Most of the families had lived in Kenya between 5 and 20 years. The students were enrolled in primary (Grade 7 = 200 and 8 = 200) or high school (Form 1 = 200 and Form 2 = 200). The proportion of male students declined in higher grades. In grade 7, the number of male students was 110 (55.0%) compared to 90 (45.0%) female students. In grade 8, female students (n = 134) outnumbered male students (n = 66). In grade 9, there were 121 female students and 79 male students. In grade 10, there were 128 female students and 72 male students. This pattern is not surprising because in Kenya, in recent years, more emphasis has been put on the education of the girls.

The Chi-square test for independence indicated a significant association between students' gender and school location, χ^2 (1, N = 800) = 28.32, $p < 0.05$. Although the number of males who attended secondary schools was less (n = 151) than the number of males who attended primary schools (n = 176) and the number of females who attended secondary schools was higher (n = 249) than the number of females who attended primary school (n = 224), the chi-square test for independence indicated that differences were not significant χ^2 (1, n = 800) = 2.98, $p > 0.05$. The proportion of male students was higher (n = 201) in urban schools than in rural schools (n = 126), whereas the proportion of female students attending rural schools was higher (n = 274) than the proportion of female students attending urban schools (n = 199).

3.3.2. *Parents and Guardians*

All of the parents and guardians who participated in the current study were from the African continent. The majority of the parents and guardians were from Somalia (43.6%) and Sudan (29.9%) while the rest came from other African countries. The majority had lived in Kenya between 5 years and 20 years (94%) and most of them had completed primary or secondary school education (76.4%). Only a minority held professional qualifications with 26% holding college certificates and 2.3% having completed a university degree. The parents and guardians who participated in the study included 341 males (42.6%) and 459 females (57.4 %) aged between 35 and 59 years (M = 47.80; SD = 4.56).

The Chi-square test for independence indicated a significant association between parents' gender and their children's grade levels, χ^2 (3, N = 800) = 308.94, $p < 0.05$. Grade 7 had the highest number of male parents/guardians (n = 101) compared to grade 8 (n = 79), Form 1 (n = 74), and Form 2 (n = 87). The proportions of male and female students in different grades appear to have a similar pattern to that of their parents/guardians. This means that the decrease in male students in higher grade levels went hand in hand with the decrease in male parents/guardians who responded to the questionnaire.

The Chi-square test for independence indicated a significant association between parent/guardian's gender and family's housing status, χ^2 (1, N = 800) = 186.16, $p < 0.05$. More than half of the families lived in semi-permanent houses (n = 442) and the rest lived in rented permanent houses (n = 358). The proportion of male parents/guardians living in permanent houses was much higher (n = 248) than the proportion of female parents/guardians (n = 110). In

contrast, more female parents/guardians lived in semi-permanent houses (n = 349) than their male counterparts (n = 93). People who live in semi-permanent houses in Kenya are mostly from the low socio-economic backgrounds and they live mostly in informal settlements (see Ejakait et al., 2011; Hungi & Thuku, 2010). The Chi-square test for independence also indicated a significant association between family status (parent or guardian) and housing status, χ^2 (1, n = 800) = 103.11, $p < 0.05$). The proportion of guardians living in semi-permanent houses (n = 320) was much higher than the proportion of parents living in semi-permanent housing (n = 122). In contrast, more parents lived in permanent houses (n = 227) compared to guardians (n = 131). This is a large difference given that the total number of parents was less (n = 349) than that of guardians (n = 451).

3.3.3. *Teachers*

The 160 teachers (99 females and 61 males) who participated in the study were all Kenyan citizens, aged between 31 years and 55 years (M = 44.66; SD = 4.96). The Chi-square test for independence indicated no significant association between teachers' gender and school location, χ^2 (1, n = 160) = .08, $p < 0.05$. Most of them had either a Bachelor's degree (n = 76) or a Diploma in Education (n = 64). Only two teachers had a Masters degree or above while 18 teachers (11.3%) had a teacher certificate. Most of the teachers had between 10 and 20 years of teaching experience (n = 76), and a few teachers had taught for more than 20 years (n = 7). Among the teachers who had less years of teaching experience were those who had taught for 5 years and below (n = 16) and those who had taught for between 5 and 10 years (n = 61). Teachers indicated that they taught children coming from varied socio-economic backgrounds.

Of the 160 teachers, 94 indicated that they taught students from low socio-economic status homes, 50 teachers taught students from average socio-economic status homes, and 16 teachers taught students mostly from high socio-economic status backgrounds.

A Chi-square test for independence indicated a significant association between students' gender and teachers' expectations of their future educational attainment, χ^2 (1, N = 800) = 80.27, $p <$ 0.05. Teachers' expectations were higher for male refugee students than for female refugee students, especially at higher levels of education. Of the 327 male students, teachers expected 19 to complete secondary school, 59 to complete a two-year college, 86 to complete a three-year diploma, 94 to complete a Bachelors degree, and 69 to complete a Masters degree and above. Of the 473 female students, teachers expected 91 to complete secondary education, 127 to complete a two-year college, 142 to complete a three-year diploma, 83 to complete a Bachelors degree, and only 30 to complete a Masters and/or PhD.

3.4. Measures

Students' self-efficacy, parental involvement, teachers' expectations, and teachers' self-efficacy were the measured independent variables. The other independent variables included student and parent/guardian age, student and parent/guardian gender, student grade level, family type (parent/guardian), housing status (permanent/semi-permanent), parent/guardian level of education, teacher age, gender, qualifications, teaching experience, school type (Primary/Secondary), and school location (Urban/Rural). Academic achievement was the dependent variable.

3.4.1. *Self- Efficacy for Self-Regulated Learning*

Muris (2001) developed the Self-Efficacy Questionnaire for Children (SEQ-C) to examine academic self-efficacy (ASE), social self-efficacy (SSE), and emotional self-efficacy (ESE) of children and adolescents. The SEQ-C is a shortened 24 item modified version of the 37 item Perceived Self-Efficacy scales initially developed by Bandura et al. (1999). Accepting Bandura's suggestion to consider the relevance of emotional self-efficacy in the study of affective disorders, Muris added the emotional self-efficacy subscale to Bandura's academic self-efficacy and social self-efficacy subscales. Muris reported high estimates of internal consistency (Cronbach's alpha) for the 8-item academic self-efficacy scale (0.88), the 8-item social self-efficacy scale (0.85), and the 8-item emotional self-efficacy scale (0.86). Emotional self-efficacy correlated 0.40 ($p < 0.05$) with social self-efficacy and 0.41 ($p < 0.05$) with academic self-efficacy, and social self-efficacy correlated 0.17 with academic self-efficacy. Mostert (2007) used the 24-item SEQ-C to examine self-efficacy among Afrikaans speaking adolescents and reported good reliability estimate for the full scale, 0.83, on a South African sample. Similarly, Willemse (2008) used the SEQ-C in a South African sample of colored high school students and found a similar value of 0.79 for the reliability of the full scale.

A modified version of the SEQ-C was used in the present study. The modification involved replacing the ASE scale with the 7-item Self-Efficacy for Self-Regulated Learning (SESRL) scale developed by Usher and Pajares (2008), which is a shortened version of the 11-item SESRL scale (Bandura, 2006). The SESRL scale assesses beliefs that students' hold about their capability to successfully utilize self-regulatory strategies (Usher & Pajares, 2008; Zimmerman

et al., 1992). The ASE subscale and the SESRL scale contain several similar items. For example, items that are identical across the SESRL scale and the ASE scale are: "*How well can you study when there are interesting things to do?"* and "*How well can you succeed in finishing your homework on time*?" Across studies, scores on the items in the SESRL scale have proved to be internally consistent with alpha coefficients ranging from 0.78 to 0.84 (e.g., Britner & Pajares, 2006; Caprara et al., 2008; Klassen, 2010; Usher & Pajares, 2008). Klassen (2007, 2010) found the SESRL scale to be a better predictor of academic achievement than the ASE scale. While Usher and Pajares' (2008) SESRL subscale of the self-efficacy scale is on a 6-point Likert scale, a 5-point scale (1 – not at all, …, 5 – very well) was used in the present study in order to have the same response options across the three subscales.

3.4.2. *Parental Involvement*

The Family Involvement Questionnaire (FIQ) developed by Fantuzzo, Tighe, and Childs (2000) and the Parent Teacher Involvement Questionnaire (PTIQ) developed by Kohl et al. (2000) were used to measure parental involvement. The 42 four-point (1 – rarely, … 4 – always) Likert-type items included in the FIQ assess three dimensions of parental involvement based on theories of parental involvement (Eccles & Harold, 1996; Epstein, 1995; Grolnick & Slowiaczek, 1994; Kohl et al., 2000). The three parental involvement dimensions are: School-Based Involvement, Home-Based Involvement, and Home-School Conferencing. The School-Based Involvement dimension is defined by activities and behaviors that parents engage in at school to benefit their children, such as participating in school functions, planning trips and meeting other parents to plan events. Home-Based Involvement includes behaviors reflecting active promotion of a

learning environment at home, such as creating space for learning activities at home and providing learning opportunities for the child. Home-School Conferencing describes communication behaviors between parents and school personnel about a child's educational experiences and progress such as talking with the child's teacher about learning difficulties and accomplishments and discussing with the child's teacher about ways to promote learning at home. Fantuzzo et al. (2000) reported Cronbach's alphas of 0.85, 0.85, and 0.81, respectively, for the School-Based Involvement, Home-Based Involvement, and Home-School Conferencing sub-scales. Concurrent validity was demonstrated through significant correlations between the three self-report dimensions of the FIQ (Fantuzzo, Tighe, & Perry, 1999; Fantuzzo et al., 2000).

The Parent-Teacher Involvement Questionnaire (PTIQ) developed by Kohl et al. (2000) has both parent- and teacher-report versions. The parent-report version of the PTIQ is a 26-item measure assessing: (a) the amount, type, and initiator of contact that occurs between the parent and the teacher; (b) the quality of the relationship between the parent and the teacher; (c) the parent's involvement in the child's school; (d) the degree of academic stimulation at home; and (e) the parent's satisfaction with the child's school. These items are also coded on a 5-point scale ranging from 0 to 4. The teacher report is a 21-item measure assessing (a) the amount, type, and initiator of contact that occurs between parents and the teachers; (b) the quality of the relationship between the parent and the teacher; (c) the parent's involvement in the child's school; and (d) the teacher's perception of the parent's value of education. The responses are coded on a 5-point scale ranging from 0 (rarely) to 4 (always).

Kohl et al. (2000) reported internal consistency (Cronbach's alpha) for the PTIQ as follows:

Parent-Teacher Contact (α = 0.71), Parent Involvement at School (α = 0.81), Quality of Parent-Teacher Relationship (α = 0.89), Teacher's Perception of Parent (α = 0.93), Parent Involvement at Home (α = 0.67), and Parent Endorsement of School (α = 0.92).

3.4.3. *Teacher Expectations*

Teacher expectations of students were measured using the expectancy scale developed by Van den Bergh et al. (2010). The scale consists of six items measured on a 5-point (1 – Not Applicable … 5 – Totally Applicable) Likert scale. Sample items are ''*He or she will probably have a successful school report, is a capable student, can perform well in all school subjects, is an intelligent student, and will probably have a high score on the final end of year exam.*'' The internal consistency of the expectancy scale was high with Cronbach's alpha of 0.97 (Van den Bergh et al., 2010). Van den Bergh et al. (2010) reported that higher teacher expectancies were related to higher student achievement (math test score, r = 0.584, $p < .001$; text comprehension test score, r = 0.528, $p < .001$).

Teachers were also asked how far they thought their refugee students would go in education. This question has been used extensively in research (e.g., Mistry et al., 2009; Zhang, 2012) investigating teacher expectations. In Zhang's (2012) study, there were 6 options ranging from "*finishing primary school*" to "*graduating from college or above*."

3.4.4. *Teachers' Self-Efficacy (TSE)*

Teachers' self-efficacy was assessed with the Teachers' Self-Efficacy Scale (TSES) developed and validated by Tschannen-Moran and Hoy (2001). The scale is said to have adequate reliability

and validity for the whole scale and for its three subscales: self-efficacy for classroom management, self-efficacy for instructional strategies, and self-efficacy for student engagement. Tschannen-Moran and Hoy (2001) reported correlations between the 24-item long form and 12-item short form ranging between 0.95 and 0.98. The scale requires teachers to rate on a scale of 1 (*Nothing*) to 9 (*A great deal*) how much they can do to implement a variety of assessment strategies, provide an alternative explanation or example, craft good questions, implement alternative strategies, control disruptive behavior, get students to follow classroom rules, calm students who are disruptive or noisy, establish a classroom management system, get students to believe they can do well in schoolwork, help students value learning, motivate students who show low interest in schoolwork, and assist families in helping their children do well in school. Klassen, Bong, Usher, Chong, Huan et al. (2009) administered the TSES short form in five countries and reported reliabilities ranging from 0.71 to 0.94 for the TSES subscales. They also reported positive correlations between teacher-efficacy and teacher satisfaction with correlations ranging from 0.17 to 0.48.

3.4.5. *Academic Achievement*

Grades resulting from teachers' ratings of students in academic and non-academic subjects as well as students' average grades have been considered as reliable and valid measures of academic achievement (e.g., Carroll, Houghton, Wood, Unsworth, Hattie et al., 2009; Mistry et al., 2009; Van den Bergh et al., 2010). In the present study, final end of the year average grades for the previous academic year were taken as the measure of students' academic achievement. In Kenya, students' grade point average (GPA) across five compulsory academic subjects

(Mathematics, English, Kiswahili, Science, and Social Studies) is considered a measure of academic achievement for students, and used to promote students to the next grade level. These average scores were used in the present study.

3.5. Pre-Testing of Research Instruments

3.5.1. *Pilot Test*

Given the measuring instruments described above were developed and used outside of Kenya, they were pilot tested with 80 refugee students, their parents/guardians, and 16 teachers in four schools (one rural and one urban primary, one rural and one urban secondary) not included in the final sample. The pilot test school sample mirrored the main sample. The objective of the pilot test was to assess the feasibility of the administration of the instruments and to modify questions that were confusing to the respondents. The time these pilot test students, teachers, and parents/guardian took to complete their questionnaires was used to ensure that enough time was allocated for completion of the questionnaires in the main study. Pilot data was not included in the final analysis.

3.5.2. *Expert Review*

Validity of research instruments was ensured through seeking opinions from experts from a local institution of higher learning. The experts were requested to assess the instruments to determine their relevance for refugee students and their parents/guardians in Kenya. Their recommendations for suggested changes were incorporated into the final instruments. For example, in the students' questionnaire, students were required to choose the type of family and

the "*No parent*" option was removed because none of the students in the pilot study chose this option. The experts thought this option was meaningless and confusing to the participants since in the local context it could mean that students were either orphaned or that the parents had re-married. In circumstances where there are no parents, children live with their grandparents or other relatives who then become their guardians. One question in the emotional self-efficacy (ESE) subscale that asks students "*how well they can give themselves a peptalk when they feel low*" was removed because it was deemed confusing for the participants; thus the final subscale had a total of 7 questions instead of the initial 8 questions.

The original parent questionnaire had two scales assessing parental involvement: the FIQ and the PTIQ. The experts felt that since the population being examined was composed of a variety of family members and not just parents, the PTIQ was inappropriate. The experts also felt that the PTIQ measured parent-teacher relationship rather than involvement. Therefore the PTIQ was not used in the main study. Further, some of the questions in the FIQ that were deemed irrelevant to the Kenyan situation or to the population being examined were removed from the questionnaire. Such items included questions that asked parents about volunteering in class, going on school trips with children, and taking children to the library. Consequently, the FIQ was revised taking into account the experts' comments and recommendations before it was administered to participants in the main study.

The teacher expectations scale was slightly modified based on the results from the pilot study and the experts' opinions. For example, unlike in the original scale (Zhang, 2012) that had 6 options ranging from "*Finishing primary*" to "*Finishing Masters and above*," in the current study

options ranged from "*completing secondary school*" to "*earning a Master's Degree or above*." The option for finishing primary school was removed because none of the participants in the pilot study selected it and half of the sample had already finished elementary school. Additionally, to maintain consistency of responses in the questionnaires in the current study, the experts recommended that the labels "*Not Applicable*" and "*Totally Applicable*" in the teacher expectations scale be replaced with "*Strongly Agree*" and "*Strongly Disagree*." In the single question that asked teachers how far in school they thought their students would go, the option of "*finishing primary*" was also removed. Therefore, the revised scale had 5 options: complete secondary school, complete a 2-year college certificate, complete a 3-year Diploma, complete a Bachelors degree, and complete Masters and above.

A copy of the modified SEQ-C used in the current study is provided in Appendix A; a copy of the modified FIQ is provided in Appendix B; a copy of the modified Teacher Expectations Scale (TES), and a copy of the TSES are provided in Appendix C.

3.6. Additional Variables

Several additional non-measured variables were also considered in the present study. These variables were intended to collect demographic information from study participants. These included student age (continuous variable), gender (coded Male = 0; Female = 1), grade level (coded Grade 7 = 1; Grade 8 = 2; Form 1 = 3, and Form 2 = 4), parent/guardian age (continuous variable), parent/guardian gender (coded Male = 0; Female = 1), family type coded (guardian = 0; parent =1), level of education (coded less than primary = 1; completed primary = 2; completed secondary = 3; completed college certificate = 4; completed university = 5), housing status

(coded semi-permanent = 0; permanent = 1), teacher age (continuous variable), teacher gender (Coded Male = 0; Female = 1), teacher qualifications (coded teacher certificate = 1; Diploma = 2; Bachelors Degree = 3; Masters and above = 4), years of teaching experience (coded 0-5 years = 1; 5-10 years = 2; 10-20 years = 3; and More than 20 years = 4), and school location (coded Urban = 1; Rural = 0), school type (coded primary = 0; secondary = 1).

3.7. Data Collection Procedure

The questionnaires for the refugee students, their parents, and their teachers in the main study were administered in schools on a schedule that was provided by the schools' principals under the direction of the educational officers. Two trained research assistants assisted the researcher in collecting the data from students, teachers, and parents. Both research assistants were graduate students with a Master's degree in Education, and were teaching in higher institutions of learning in Kenya. One of the research assistants had 10 years of teaching experience while the other had 15 years of experience in both teaching and administrative work.

The data were collected within a period of 3 months. The questionnaires for the students were administered to the students in groups of 20 during class time in a room that was specifically set aside for the purpose of the research in each school. Similarly, the questionnaires for the parents/guardians were administered to the parents/guardians in groups of 20 after classes in a room that was specifically set aside for the purpose of the research in each school. Questionnaires for parents/guardians were administered after classes because some students needed to go home to take care of their siblings so that parents/guardians could come to the school. Questionnaires for teachers were administered during the lunch hour in order to avoid

interfering with the schools' classroom timetables. Each class teacher filled the questionnaires for the selected five students in their class. The research team members that administered the questionnaires were available for questions during all data collection sessions. Students, parents/guardians, and teachers were informed about the nature of the study and were assured of confidentiality by the researcher prior to the distribution of the questionnaires. Participants were requested to complete the questionnaires in approximately 45 minutes.

3.8. Logistical and Ethical Considerations

Ethical approval for the study was received from the Research Ethics Office at the University of Alberta as well as from the National Research Council of Kenya. In Kenya, a research permit can only be granted after the researcher has satisfied all the requirements and meets all the local ethical considerations. For example, the researcher has to submit three complete research proposals with complete references and a declaration page fully signed by the concerned parties. The researcher also submits a letter from the university where he or she is currently studying, a letter of affiliation from a local university or institution partnering with the researcher, the researcher's and research assistants' curriculum vitae, and the payment for the research permit.

Once the senior officers at the National Council for Education, Science, and Technology approve the research, a research permit and a letter of introduction are provided to the researcher. The letter of introduction has detailed information about the researcher, the topic of research, the place where research is to take place, and the duration of research. The researcher presents the research permit and the letter of introduction to junior officers such as the Provincial Education Officers, District Education Officers, principals of schools, and teachers who will be involved in

the research. Although it is not usually a common practice to ask for permission from the junior officers but rather just to show the junior officers the research permit or letter from their senior officers, researchers can follow the chain of command at each level. For example, for research conducted in a school, the principal is the only authority that gives permission for researchers to contact the parents or the principal can choose to contact the teachers, parents, and students on behalf of the researcher once he or she receives a copy of the research permit and a letter of introduction. In the field, the principals have the authority to schedule and ask the students, parents, and teachers to be available for participation in the research. It is a common practice and culture for the teachers, students, and parents to follow the principals' directives without questioning.

For the current study, the researcher obtained a research permit from the National Council for Science and Technology, in the Ministry of Education, on presentation of a letter of introduction from the University of Alberta, and a letter of affiliation from a local institution of higher education (Kenya Institute of Special Education). The researcher also obtained a letter of introduction from the city council of Nairobi before proceeding to administer the research instruments in city council schools. The researcher made preliminary visits to the non-governmental organizations that support refugee students in Kenyan schools in order to discuss the purpose of the study, and to find out any vital information regarding the schools that were eligible for participation in the research. She also visited both primary and secondary schools where research was conducted in order to establish rapport with the administrators and to discuss the purpose of the study.

Additionally, the principals of the eligible schools were approached for permission to undertake the research. Information sheets pertaining to the purpose and nature of the study were sent to the principals ahead of time. Information sheets were also issued to the participating refugee students, teachers, and parents in the schools that agreed to participate ahead of time. All participants were assured of the confidentiality of the information that they provided. Since it is culturally offensive to ask the participants to sign a consent form, consent was sought in alternative ways such as asking participants not to respond to the questions if they did not feel comfortable to do so. On the first page of each questionnaire there were instructions reading, "By responding to the questions or statements, you are consenting to participate in the study." Instructions were read aloud, and therefore participants had an option of not responding to the questions if they did not consent. Other ethical considerations included using information only for the disclosed purpose and treating the refugee youth, parents, and teachers with dignity. This was attained by approaching the refugee students, parents, and teachers in such a way that they did not feel treated as refugee youth, refugee parents, or teachers of refugee students (as a label) but as any other students, parents, and teachers in Kenya.

3.9. Data Analysis

The data analyses were completed in two stages. The first stage included psychometric analyses of the questionnaires used in the study. This stage involved establishing the psychometric characteristics of each research instrument. The Statistical Package for Social Sciences (SPSS) was used for computing reliability coefficients (Cronbach's α) and descriptive statistics.

The second stage involved the analyses completed to answer the research questions. Since

students and parents were nested in classrooms (teachers) and classrooms were nested in schools, the Hierarchical Linear Modeling (HLM 7) program was used for the analyses (Raudenbush & Bryk, 2002; Raudenbush, Bryk, Cheong, & Congton, 2011). HLM accounts for nested data, accounting for the relationships among the predictor variables at each level and across the levels (Garson, 2013; Woltman, Feldstain, MacKay, & Rocchi, 2012). Not accounting for nested data structures generally leads to aggregation bias, misestimated standard errors, and heterogeneity of regression (Raudenbush & Bryk, 2002). Aggregation bias occurs when a variable takes on a different meaning in its aggregated form than it does in its disaggregated form. When entering the aggregated variable into the model as a predictor variable it may then bias the results toward the aggregated meaning of the variable. In the current study, the use of HLM to analyze the nested data prevented this bias.

The variables examined at each level are presented in Table 1. As shown, eleven predictor variables were considered at Level 1, five at Level 2, and one at Level 3.

Table 1

Predictor Variables considered at each Level

Hierarchical Level	Type of Hierarchical Level	Variables Examined
Level 1	Student	Student GPA
		Student Age
		Student Gender
		Grade Level
		Family Type
		Housing Status
		Student's self-efficacy
		Parent/Guardian Age
		Parent/Guardian Gender
		Parent/Guardian Level of Education
		Parent/Guardian Involvement
		Teacher Expectations
Level 2	Teacher/Classroom	Teacher Age
		Teacher Gender
		Teacher Qualifications
		Teaching Experience
		Teacher self-efficacy
Level 3	School	School Location

Chapter 4

Results

4.1. Introduction

This chapter presents an analysis and interpretation of data that were collected from the refugee students, their parents/guardians, and teachers. The chapter is divided into two sections. First, examination of research instruments is presented, and second, analyses addressing the main research questions are presented.

4.2. Examination of the Research Instruments

The first question in the current study was whether the instruments that had been used to examine student self-efficacy, parental involvement, teacher expectations, and teachers' self-efficacy in high-income countries could successfully be used to examine the same constructs in a low-income country with the specific target population of refugee students, their parents/guardians, and their teachers. First, the means, standard deviations, and internal consistency reliabilities were computed. For the scales that had more than one subscale, the correlations among the subscale scores were examined and principal components analyses (PCA) were conducted to see if the subscales were distinct. The reliability of the scale is reported in terms of the internal consistency of scores on items that are considered to measure the same concept. Since the questionnaire items in the current study were rated on a Likert Scale, the Cronbach's alpha formula was employed in determining reliability (George & Mallery, 2003; Gliem & Gliem, 2003).

4.2.1. *Psychometric Properties of the Modified Self-Efficacy Scale for Children* (*SEMQ-C*)

The number of items, minimum score, maximum score, mean (*M*), standard deviation (*SD*), internal consistency (r_{xx}), and correlations among the subscales and with the total scale are reported in Table 2 for the three subscales and the SEMQ-C.

The minimum scores, maximum scores, and means indicate that there were no floor or ceiling effects. The standard deviations indicate that the students varied in their responses. The internal consistencies are all high and comparable to the values found in the United States (Usher & Pajares, 2008) and Canada (Klassen, 2010). Unlike the case in the high-income countries, the correlations among the subscale scores and with the total SEMQ-C score were very strong, ranging from 0.84 to 0.95 (cf., Muris, 2001; see Chapter 3).

Table 2

Psychometric Properties of the SEMQ-C and its Subscales

Subscale/Scale	*Min.*	*Max.*	*Mean*	*SD*	r_{xx}	SESRL	SSE	ESE
SSERL	7	35	18.46	6.68	0.85	1.00	0.85	0.84
SSE	8	40	21.37	7.10	0.87	0.85	1.00	0.87
ESE	7	35	18.93	6.74	0.84	0.84	0.87	1.00
SE	22	110	58.78	19.51	0.95	0.94	0.95	0.95

Note. Min = minimum; Max = maximum; SD = standard deviation; r_{xx} = Cronbach's alpha; SESRL = self-efficacy for self-regulated learning; SSE = social self-efficacy; ESE = emotional self-efficacy; SE = self-efficacy scale total score.

Given the strength of the intercorrelations among the 3 subscales and the sub-scales with the total scale, it appeared that the scale was unidimensional. To confirm this, the subscales' scores were subjected to a principal components analysis to determine the number of factors (Guttman, 1954). Only the first component had an eigenvalue greater than one (2.7), and it accounted for 90.5% of the total variance. Further, application of the Scree test (Cattell, 1966) revealed only one factor. Therefore, the three subscale scores were combined to form one scale as the new self-efficacy scale that was used in the remaining analyses.

4.2.2. *Psychometric Properties of the Parental Involvement Scale* (*FIQ*)

The number of items, minimum score, maximum score, mean (*M*), standard deviation (*SD*), internal consistency (r_{xx}), and correlations among the subscales and with the total scale for the family involvement questionnaire (FIQ) are reported in Table 3 for the three subscales and the total scale.

The minimum scores, maximum scores, and means indicate that there were no floor or ceiling effects. The standard deviations indicate that the parents/guardians varied in their responses. The internal consistencies of the three subscales of the FIQ are strong and close to 0.90. Likewise the correlations among the subscale scores and with the total score were very strong, ranging from 0.88 to 0.96 as shown in Table 3.

Table 3

Psychometric Properties of FIQ Scale and its Subscales

Subscale/Scale	*Min.*	*Max.*	*Mean*	*SD*	r_{xx}	SBI	HBI	HSC
SBI	8	32	17.48	5.94	0.88	1.00	0.90	0.90
HBI	13	48	28.15	8.11	0.89	0.90	1.00	0.88
HSC	10	39	22.05	6.84	0.88	0.90	0.88	1.00
FIQ	31	119	67.68	20.18	0.96	0.96	0.96	0.96

Note. Min = minimum; Max = maximum; SD = standard deviation; r_{xx} = Cronbach's alpha; SBI = school-based involvement; HBI = Home-based involvement; HSC = home school conferencing; FIQ = family involvement questionnaire total score.

Given the strength of the correlations among the 3 subscales and the sub-scales with the total scale, it appeared that the scale was unidimensional. To confirm this, the subscales' scores were subjected to a principal components analysis to determine the number of factors (Guttman, 1954). Only the first component had an eigenvalue greater than one (2.8), and it accounted for 93.9% of the total variance. Further, application of the Scree test (Cattell, 1966) revealed only one factor. Therefore, the three scale scores were combined to form one score to reflect parent/guardian involvement in their children's education.

4.2.3. *Psychometric Properties of the Teacher Expectations Scale (TES)*

The number of items, minimum score, maximum score, mean (*M*), standard deviation (*SD*), internal consistency (r_{xx}) of the TES are reported in Table 4 for the teacher expectation scale.

The minimum score, maximum score, and mean indicate that there were no floor or ceiling effects. The standard deviation indicates that the teachers varied in their responses. The internal consistency of the TES was very good at 0.91.

Table 4

Psychometric Properties of TES Scale

Scale	*Min.*	*Max.*	*Mean*	*SD*	r_{xx}
TES	6	30	17.44	5.46	0.91

4.2.4. *Psychometric Properties of the Teachers' Self-Efficacy Scale* (*TSE*)

The number of items, minimum score, maximum score, mean (*M*), standard deviation (*SD*), internal consistency (r_{xx}), and correlations among the subscales and with the total scale are reported in Table 5 for the three subscales and the TES.

Table 5

Psychometric Properties of Teachers' Self-Efficacy Scale and its Subscales

Subscale/Scale	*Min*	*Max*	*Mean*	*SD*	r_{xx}	Instr.	Manag.	Engage
Instr	9	35	21.59	4.37	0.74	1.00	0.84	0.77
Manag	5	31	20.58	5.04	0.89	0.84	1.00	0.82
Engage	4	35	21.45	4.73	0.88	0.77	0.82	1.00
TSE	19	99	63.55	13.23	0.93	0.92	0.95	0.92

Note. Min = minimum; Max = maximum; SD = standard deviation; r_{xx} = Cronbach's alpha; Instr = Instructional strategies; Manag = classroom management; Engage = student engagement; TSE = teacher self-efficacy scale total score

The minimum scores, maximum scores, and means indicate that there were no floor or ceiling effects. The standard deviations indicate that the students varied in their responses. With the exception of the Instructional Strategies Subscale, the internal consistencies are all high, The correlations among the subscale scores and with the total TES score were very strong, ranging from 0.77 to 0.95, with the lowest correlation likely due to attenuation due to the lower reliability of the Instructional Strategies Subscale.

Given the strength of the correlations among the 3 subscales and the sub-scales with the total scale, it appeared that the scale was unidimensional. To confirm this, the subscales' scores were subjected to a principal components analysis to determine the number of factors (Guttman, 1954). Only the first component had an eigenvalue greater than one (2.6), and it accounted for 89.1% of the total variance. Further, application of the Scree test (Cattell, 1966) revealed only

one factor. Therefore, the three subscale scores were combined as the new Teachers' Self-Efficacy variable used in the remaining analyses.

4.3. HLM Analysis and Results

A nested design in which students were nested within classes and classes were nested within schools was used in the analysis of the data. Prior to conducting the HLM analyses, the distribution of scores for the measured variable were examined for outliers. No outliers were found. The variables considered at each level are presented in Table 1 at the end of Chapter 3.

A three-level HLM analysis was conducted separately for the sample of refugee students in Grades 7 and 8 in the primary schools and the sample of refugee students in Forms 1 and 2 in the secondary schools. The sample for the primary schools contained 400 refugee students in Grades 7 and 8 and their parents/guardians at the student level (Level 1), nested within 80 classes (Level 2), nested within 20 primary schools (Level 3). Likewise, the sample for the secondary schools contained 400 refugee students in Forms 1 and 2 and their parents/guardians at the student level (Level 1), nested within 80 classes (Level 2), nested within 20 secondary schools (Level 3). The dependent variable was the mean grade point average of the observed scores for five compulsory subjects (Mathematics, English, Kiswahili, Science, and Social Studies; $M = 65.24$, $SD = 7.58$, $Min = 46$, $Max = 79$, for the primary school sample, and $M = 63.93$, $SD = 8.98$, $Min = 40$, $Max = 88$, for the secondary school sample).

The HLM analyses were completed in four steps. The first step involved running the null model with no predictors at any level in order to obtain estimates of the initial variance at each level and

to confirm that the variability in the outcome variables at Levels 1, 2, and 3 is significantly different from zero. The second step involved three analyses: Level 1 with predictors and Levels 2 and 3 with no predictors, Level 2 with predictors and Levels 1 and 3 with no predictors, and Level 3 with predictors and Levels 1 and 2 with no predictors. These analyses were completed to allow examination of the predictors at each level in the absence of the relationship among the predictors across the three levels. As such, these analyses are similar to an ordinary least squares regression analysis at each level. The third step involved a full HLM analysis with all predictors at each of the three levels. This allowed examination of the full set of variables and identification of the significant predictors at each level in the presence of the predictors at all levels. The fourth step involved determining the final set of significant predictor variables at each level. A series of analyses were conducted in which non-significant predictors were removed one at a time starting from the least significant predictor until only significant predictors remained. The removed predictors were then re-entered one at a time until the final set of significant predictors was obtained. This to-and-fro approach was taken given the relationships among the predictors within and across the levels.

4.3.1. *The Null Models*

The equations for each level of the null model are:

$$Y_{GPA\ Mean_{ijk}} = \pi_{0jk} + e_{0ijk},$$

$$\pi_{0jk} = \beta_{00k} + r_{0jk},$$

and

$$\beta_{00k} = \gamma_{000} + u_{00k},$$

where $Y_{GPA\,Mean_{ijk}}$ is the mean grade point average for student *i* in class *j* in school *k*;

π_{0jk} is the mean grade point average of class *j* in school *k*;

e_{0ijk} is the random effect for student *i* in class *j* in school *k*, that is the deviation of student *ijk*'s grade point average from the class mean. These effects contain a systematic component and a random component. The random component is assumed to be normally distributed with a mean of zero and variance σ^2;

β_{00k} is the mean grade point average of school *k*;

r_{0jk} is the random effect for class *j* in school *k*, that is the deviation of class *jk*'s grade point average from the school mean. These effects contain a systematic component and a random component. The random component is assumed to be normally distributed with a mean of zero and variance σ_π^2;

γ_{000} is the grand mean; and

u_{00k} is the random effect for school *k*, that is the deviation of school *k*'s grade point average from the grand mean. These effects contain a systematic component and a random component. The random component is assumed to be normally distributed with a mean of zero and variance σ_β^2.

The analyses of the null model at the primary and at secondary levels indicated that there is a difference in results between the primary and the secondary schools. The three variances for the primary schools were 50.06 at Level 1, 2.42 at Level 2, and 4.77 at Level 3. The corresponding variances for the secondary schools were 74.68, 0.02, and 5.64. Whereas there was significant ($p < 0.05$) explainable variance at the student, class/teacher, and school levels for the primary sample and at the student and school levels for the secondary sample, there was no explainable variance at the class/teacher level for the secondary sample. In other words, while there was a difference among the class means at the primary level, there was no difference among the class means at the secondary level. Consequently, a three level HLM analysis was conducted at the primary level and a two level analysis was conducted at the secondary level. The results of the analyses at Steps 2, 3, and 4 are presented separately for the primary sample and for the secondary sample in the next two sections of this chapter.

4.3.2. *HLM Results for the Primary Schools*

4.3.2.1. The Individual Level Models for the Primary Schools

The HLM equations at the student, class/teacher, and school levels for the student only model are:

$$Y_{GPA\,Mean_{ijk}} = \pi_{0jk} + \sum_{m=1}^{11} \pi_{m0jk}(P_{mijk} - \bar{P}_{m...}) + e_{ijk}$$

$$\pi_{0jk} = \beta_{00k} + r_{0jk},$$

and

$$\beta_{00k} = \gamma_{000} + u_{00k},$$

where P_{mijk} is the response of individual *i* in class *j* in school *k* to measure *m*, where the 11 measures include age, gender, grade level, self-efficacy, and teachers' expectation of refugee student *i* in class/teacher *j* in school *k*; age, gender, level of education, and involvement in school of the parents/guardian of refugee student *i* in class/teacher *j* in school *k*; and family type, and Housing Status of refugee student *i* in class/teacher *j* in school *k* and $\overline{P}_{m...}$ is the grand mean of measure *m*.

The student level predictors are presented in Table 6.

Table 6

Student-Level Predictors

	B	*S.E*	*t*	*p*
Student Age	0.01	0.13	0.05	0.959
Student Gender	-0.87	0.32	-2.73	0.007
Student Grade Level	0.72	0.35	2.05	0.041
Student Self-Efficacy	0.07	0.02	3.34	0.001
Parent/Guardian Age	-0.01	0.04	-0.17	0.867
Parent/Guardian Gender	-1.71	0.44	-3.86	0.001
Parent/guardian Education	0.25	0.36	0.70	0.484
Family Type	0.75	0.44	1.71	0.088
Housing Status	0.05	0.34	0.15	0.884
Parent/guardian Involvement	0.13	0.02	6.21	0.001
Teacher Expectations	2.27	0.21	10.98	0.001

As shown in Table 6, of the 11 Level 1 variables, six were related to refugee students' academic achievement at 0.05 level of significance. These included student gender (coded Male = 0, Female = 1), grade level (coded Grade 7 = 1, Grade 8 = 2); student's self-efficacy (given as total score); parent/guardian gender (coded Male = 0, Female = 1); parent/guardian involvement (total score); and teacher's expectations of each refugee student (coded complete secondary school = 1, complete a 2-year college certificate = 2, complete a 3-year Diploma = 3, complete a Bachelor's degree = 4, complete Master's degree and above = 5). Five variables were not significantly related to students' academic achievement. These were student age (continuous variable);

parent/guardian age (continuous variable); family type (coded guardian = 0, parent = 1); level of education (coded less than primary = 1, completed primary = 2, completed secondary = 3, completed college certificate = 4, completed university = 5); and housing status (coded semi-permanent = 0, permanent = 1).

The coefficients in Table 6 are interpreted as partial coefficients where the coefficient for each variable is adjusted for the other 10 variables. For example, the coefficient for gender of refugee students, -0.87, has been adjusted for the other 10 student level variables. The interpretation of gender coefficient of -0.87, which was significant at the 0.05 level, is that female refugee students' mean GPA tended to be lower than that of their male counterparts holding all other variables constant. The coefficient for grade level indicates that refugee students in grade 8 tended to have higher GPA scores than their grade 7 counterparts. The coefficient for student self-efficacy was positive and significant at the 0.05 level, indicating that students with higher self-efficacy tended to perform better than refugee students with lower self-efficacy. The coefficient for parent/guardian gender was negative and significant at the 0.05 level indicating that the refugee students for whom a female parent/guardian filled the questionnaire tended to score lower than refugee students for whom a male parent/guardian filled the questionnaire. The coefficient for parent/guardian involvement suggests that refugee students whose parents/guardians were more involved in their education tended to have higher GPA scores than refugee students whose parents/guardians were less involved. The coefficient for teacher expectations is 2.27, which is significant at the 0.05 level, and indicates that refugee students for whom teachers held high expectations tended to do better in school than refugee students for whom teachers held low expectations.

The HLM equations at the student, class/teacher, and school levels for the class/teacher only model are:

$$Y_{GPA\ Mean_{ijk}} = \pi_{0\,jk} + e_{0ijk}\ ,$$

$$\pi_{0\,jk} = \beta_{q00k} + \sum_{q=1}^{5} \beta_{q00k}(T_{qjk} - \bar{T}_{q..}) + r_{0\,jk}$$

and

$$\beta_{00k} = \gamma_{000} + u_{00k},$$

where T_{qjk} is the response of individual *i* in class *j* in school *k* to measure *q*, where the five measures include teacher age, gender, qualifications, and teachers' self-efficacy in relation to refugee student *i* in class/teacher *j* in school *k*; and $\bar{T}_{q..}$ is the grand mean of measure *q*.

The model includes the following teacher-level predictors of academic achievement: teacher's age, gender, qualifications, experiences, and self-efficacy. The results are presented in Table 7.

Table 7

Class/Teacher Level Predictors

	B	*S.E*	*t*	*p*
Teacher Gender	0.08	0.54	0.15	0.885
Teacher Age	-0.70	0.07	-1.07	0.291
Teacher Qualifications	-0.06	0.51	-0.12	0.909
Teacher Experience	0.73	0.31	2.43	0.018
Teacher Self-Efficacy	0.32	0.03	11.43	0.001

As shown in Table 7, only two variables were significantly related to students' academic achievement: teachers' experience and teachers' self-efficacy. The coefficient for teachers' years of teaching experience was positive indicating that refugee students who were taught by teachers with more years of teaching experience tended to have higher GPA scores than refugee students whose teachers had less years of teaching experience. The coefficient for teachers' self-efficacy was also positive indicating that refugee students who were taught by teachers who had higher self-efficacy tended to have higher GPA scores than refugee students who were taught by teachers who had lower self-efficacy.

At the school level, there was only one variable, school location. The HLM equations at the student, class/teacher, and school levels for the school only model are:

$$Y_{GPA\,Mean_{ijk}} = \pi_{0\,jk} + e_{0ijk}\,,$$

$$\pi_{0\,jk} = \beta_{00k} + r_{0\,jk},$$

and

$$\beta_{00\,k} = \gamma_{000} + \gamma_{SLk} SL_{00\,k} + u_{00\,k}\,,$$

where γ_{SLk} is the coefficient for school location for school k.

The results for the school model for the primary level are provided in Table 8.

Table 8
School Level Predictor

Random Effect	*B*	*S.E*	*t*	*p*
School Location	4.45	0.76	5.81	0.001

As shown, refugee students' academic achievement can be explained by their school's location. The average GPA scores for urban school refugee students were higher than the average GPA scores for refugee students in rural schools.

4.3.2.2. The Full Model for Primary Schools

The full model includes all the predictors at Levels 1, 2 and 3. The equations are:

$$Y_{GPA\ Mean_{ijk}} = \pi_{0jk} + \sum_{m=1}^{11} \pi_{m0jk}(P_{mijk} - P_{m...}) + e_{ijk},$$

$$\pi_{0jk} = \beta_{q00k} + \sum_{q=1}^{5} \beta_{q00k}(T_{qjk} - T_{q..}) + r_{0jk},$$

and

$$\beta_{00k} = \gamma_{000} + \gamma_{SLk} SL_{00k} + u_{00k}$$

The purpose of this analysis was to identify the variables that are significant at each level taking into account the relationships among the variables within each level and across the three levels. Table 9 presents the results of the full model for the primary level.

Table 9

Full Model with All Variables at Levels 1, 2, and 3

	B	*S.E*	*t*	*p*
Student Level				
Student Age	0.04	0.13	0.31	0.757
Student Gender	-0.77	0.31	-2.46	0.014
Grade Level	0.92	0.31	3.03	0.003
Student Self-Efficacy	0.07	0.02	3.03	0.003
Parent/Guardian Age	-0.01	0.05	-0.25	0.807
Parent/Guardian Gender	-1.47	0.40	-3.66	0.001
Level of Education	0.38	0.35	1.06	0.289
Family Type	0.82	0.41	2.0	0.047
Housing Status	0.43	0.40	1.01	0.287
Involvement	0.12	0.02	5.67	0.001
Teacher Expectations	2.14	0.20	10.82	0.001
Class/Teacher Level				
Teacher Age	-0.03	0.04	-0.73	0.467
Teacher Gender	-0.27	0.23	-1.20	0.235
Qualifications	-0.25	0.36	-0.72	0.472
Experience	-0.11	0.16	-0.68	0.499
Teacher Self-efficacy	0.04	0.02	2.09	0.041
School Level				
School Location	0.91	0.38	2.41	0.027

4.3.2.3. The Parsimonious Model for Primary Schools

An iterative procedure was used next in which non-significant predictors were removed from the full model one at a time starting from the least significant predictor until only significant predictors remained. The removed predictors were then re-entered one at a time until only significant predictors remained in the final parsimonious model. The results for the final parsimonious model that includes only significant predictors of refugee students' academic achievement are provided in Table 10.

Table 10

Parsimonious Model

	B	*S.E*	*t*	*p*
Student Level				
Student Gender	-0.77	0.33	-2.32	0.020
Grade Level	0.92	0.32	2.90	0.001
Student Self-Efficacy	0.06	0.02	4.12	0.001
Parent/Guardian Gender	-1.77	0.44	-4.05	0.001
Family Type	0.80	0.34	2.34	0.020
Parent/Guardian Involvement	0.13	0.02	8.16	0.001
Teacher Expectations	2.34	0.19	11.67	0.001
Class/Teacher Level				
Teacher Self-efficacy	0.05	0.02	3.24	0.001

As shown, the same seven predictors at the student level and the same predictor at the class/teacher level that were significant in the full model were significant in the parsimonious model. In contrast, the only predictor at the school level, school location, was dropped because it was not significant in the parsimonious model.

The coefficient for student gender implies that on average female students tended to have lower GPA scores than male students. The coefficient for grade level indicates that refugee students in grade 8 tended to have higher GPA scores than their grade 7 counterparts. The coefficient for student self-efficacy implies that students who scored high on self-efficacy tended to have higher GPA scores than students who scored low on self-efficacy. The coefficient for parent/guardian gender indicates that students for whom male parents completed the questionnaires tended to have higher GPA scores than students for whom female parents completed the questionnaires. The coefficient for family type indicates that students living with their parents did on average slightly better than students living with guardians. The coefficient for parent/guardian involvement was again significant and indicates that students whose parents/guardians were more involved in their education tended to have higher GPA scores than students whose parents/guardians were less involved in their education. The coefficient for teachers' expectations indicates that students for whom teachers held high expectations tended to have higher GPA scores than students for whom teachers held low expectations. Teacher self-efficacy was the only significant variable at the teacher level retained in the parsimonious model and the coefficient indicates that refugee students whose teachers had high self-efficacy tended to have higher GPA scores than refugee students whose teachers had low self-efficacy.

4.3.2.4. Variance Explained

The variance explained by the seven retained variables at Level 1 and the variance explained by the one variable retained at Level 2 are provided in Table 11.

Although the variance explained at Level 3 is included in Table 11, the only school variable (school location) that was initially significant in the full model was dropped because it was not significant in the parsimonious model. As shown, the explained variance was 83.5% at student level (Level 1). In the case of the variances at the class/teacher level and at the school level, nearly all the variance was explained (99.8% and 99.3%). The high amounts of variance at the two higher levels are likely due to marked socio-economic differences between urban and rural schools and the characteristics of parents/guardians who live in each location.

Table 11

Explained Variance: *Parsimonious Model*

Random Effect	Initial Variance	Final Variance	Percent Variance Explained
Student	50.062	8.238	83.5%
Class/Teacher	2.418	0.004	99.8%
School	4.774	0.031	99.3%

4.3.3. *HLM Results for the Secondary Schools*

As indicated earlier, while a nested design in which students were nested within classes and classes were nested within schools was used for the primary schools, it was not possible to employ a three level HLM model for secondary schools because there was no variance at the classroom/teacher level. Consequently, a two level model was considered for the analysis of the secondary schools data with 11 variables at the student level and one variable at the school level. The sample for the secondary schools contained 400 refugee students in Forms 1 and 2 and their parents/guardians at the student level (Level 1) nested within 20 secondary schools (Level 2). The same three-step procedure following the null model step used for the primary data was followed to analyze the secondary data. It was necessary to re-run the null model given the class/teacher level was dropped.

4.3.3.1. The Null Model for Secondary Schools

The equations for the null model for the two level model are:

$$Y_{GPA\,Mean_{ij}} = \beta_{0j} + e_{ij}$$

and

$$\beta_{0j} = \gamma_{00} + u_{0j},$$

where $Y_{GPA\,Mean_{ij}}$ is the mean grade point average for student *i* in school *j*;

β_{0j} is the mean grade point average of school *j*;

e_{ij} is the random effect for student *i* in school *j* that is the deviation of student *ij*'s grade point average from the school mean. These effects contain a systematic component and a

random component. The random component is assumed to be normally distributed with a mean of zero and variance σ^2;

γ_{00} is the grand mean; and

u_{0j} is the random effect for school *k*, that is the deviation of school *k*'s grade point average from the grand mean. These effects contain a systematic component and a random component. The random component is assumed to be normally distributed with a mean of zero and variance σ_{β}^2.

The two variances were 74.69 at level 1 and 6.15 at Level 2. The Chi-square test of the residual variances revealed that both variances were significantly different from zero at the 0.05 level of significance.

4.3.3.2. The Individual Level Models for Secondary Schools

The second step involved two analyses: Level 1 with predictors and Level 2 with no predictors and Level 2 with predictors and Level 1 with no predictors. The results of the student level are followed by the results at the school level.

The HLM equations at the student and school levels for the student only model are:

$$Y_{GPA\,Mean_{ij}} = \beta_{0j} + \sum_{m=1}^{11} \beta_{mj}(P_{mj} - \bar{P}_{..}) + e_{ij}$$

and

$$\beta_{0j} = \gamma_{00} + u_{0j}$$

where β_{mj} is the coefficient for predictor P_{mj} deviated around its mean $\bar{P}_{m.}$, $m = 1, 2, \ldots, 11$ at the student level. The results are presented in Table 12.

As shown in Table 12, of the 11 variables entered, six were significantly related to refugee students' academic achievement. These included student self-efficacy, parent/guardian gender, parent's/guardian's level of education, family type, parent/guardian involvement (given as total

Table 12

Student-Level Predictors

	b	*S.E*	*t*	*p*
Student Age	-0.19	0.13	-1.41	0.160
Student Gender	-0.92	0.51	-1.81	0.071
Grade Level	-1.41	0.19	-1.18	0.238
Self-Efficacy	0.05	0.02	2.24	0.025
Parent/Guardian Age	0.04	0.05	0.82	0.415
Parent/Guardian Gender	-1.97	0.75	-2.63	0.009
Level of Education	1.99	0.69	2.87	0.040
Family Type	0.77	0.39	1.97	0.050
Housing Status	0.40	0.78	0.51	0.611
Involvement	0.10	0.03	2.46	0.014
Teacher Expectations	2.47	0.31	7.93	0.001

scores), and teacher's expectations of refugee students. Five variables were not significantly related to students' academic achievement. These were student age, student gender, parent/guardian age, grade level, and housing status.

The significant predictors at the secondary schools are interpreted in the same way as in the primary schools. For example, the coefficient for students' self-efficacy indicates that students who had high self-efficacy tended to have higher GPA scores than those who had low self-efficacy. The coefficient for parent/guardian gender shows that the GPA scores of refugee students for whom a female parent/guardian completed the questionnaire tended to be lower than GPA scores of refugee students for whom a male parent/guardian completed the questionnaire. The coefficient for parents'/guardians' highest level of education indicates that refugee students whose parents/guardians were more educated tended to have higher GPA scores than refugee students whose parents/guardians had less education. The coefficient for family type indicates that students living with parents tended to have higher GPA scores than students living with guardians. The coefficient for parent/guardian involvement suggests that refugee students whose parents/guardians were more involved in their education tended to have higher GPA scores than refugee students whose parents were less involved. The coefficient for teacher expectations is 2.47, meaning that refugee students for whom teachers held high expectations tended to have higher GPA scores than refugee students for whom teachers held low expectations.

At the school level, there was only one variable; school location. The HLM equations at the student and school levels for the school level predictors only model are:

$$Y_{GPA\,Mean_{ij}} = \beta_{0j} + e_{ij}$$

and

$$\beta_{0j} = \gamma_{00} + \gamma_{01} SL_j + u_{0j}$$

where γ_{01} is the coefficient for school location and SL_j is school location j, j = 1 or 2.

The results for the school level predictor are presented in Table 13.

Table 13

School Level Predictor

Random Effect	*B*	*S.E*	*t*	*p*
School Location	4.77	0.91	5.26	0.01

As shown, school location was a significant predictor of refugee students' GPA. The coefficient for school location was 4.77. This means that refugee students in urban secondary schools tended to have higher GPA scores than refugee students in rural secondary schools.

4.5.3.3. The Full Model for Secondary Schools

The full model includes all the predictors at Levels 1 and 2. The equations are:

$$Y_{GPA\,Mean_{ij}} = \beta_{0j} + \sum_{m=1}^{11} \beta_{mj} (P_{mj} - \bar{P}_{..}) + e_{ij}$$

and

$$\beta_{0j} = \gamma_{00} + \gamma_{01} SL_j + u_{0j}$$

As was the case for the primary level, the purpose of this analysis was to identify the variables that are significant at each level taking into account the relationships among the variables within levels and across the two levels. Table 14 presents the results of the full model analysis for the secondary level.

Table 14

Full Model with all Variables

	B	*S.E*	*t*	*p*
Student Level				
Student Age	-0.19	0.13	-1.41	0.160
Student Gender	-0.91	0.51	-1.81	0.071
Grade Level	-1.42	0.19	-1.18	0.238
Self-Efficacy	0.05	0.02	2.24	0.025
Parent/Guardian Age	0.04	0.05	0.82	0.415
Parent/Guardian Gender	-1.97	0.75	-2.63	0.009
Level of Education	1.99	0.69	2.87	0.004
Family Type	0.77	0.39	1.97	0.050
Housing Status	0.40	0.78	0.51	0.611
Involvement	0.10	0.03	2.46	0.014
Teacher Expectations	2.47	0.31	7.93	0.001
School Level				
School Location	5.10	0.41	12.33	0.001

As shown in Table 14, the coefficients for six of the 11 variables at the student level and the single variable at the school level were significantly different from zero ($p < 0.05$), thus significant variables in the full model were seven in total.

4.3.3.4. The Parsimonious Model for Secondary Schools

An iterative procedure was used next in which each non-significant variable was eliminated and then put back. The process was continued until only significant predictors remained in the model. The results for the parsimonious model are provided in Table 15.

Table 15

Parsimonious Model

Fixed Effect	*B*	S.E	*t*	*p*
Student Level				
Student Gender	-1.10	0.52	-2.10	0.038
Student Self-Efficacy	0.05	0.02	2.33	0.020
Parent/Guardian Gender	-1.92	0.71	-2.64	0.009
Parent/Guardian Education	2.10	0.75	2.77	0.006
Parental/Guardian Involvement	0.10	0.03	2.90	0.004
Teacher Expectations	2.44	0.29	8.28	0.001
School Level				
School Location	5.29	0.51	10.39	0.001

As shown in Table 15, the same predictors at the student level and at the school level as in the full model were significant in the parsimonious model with one exception. Student gender was significant in the parsimonious model but not significant in the student (Level 1) model or the full model.

The interpretation of results in the parsimonious model is as in previous models. For example, the coefficient for students' gender was negative, meaning that female refugee students tended to have lower GPA scores than their male counterparts. The coefficient for students' self-efficacy indicates that refugee students who had high self-efficacy tended to have higher GPA scores than refugee students who have low self-efficacy. The coefficient for parent/guardian gender was negative, which indicates that the performance of refugee students for whom a male parent/guardian filled the questionnaire tended to have higher GPA scores than refugee students for whom a female parent/guardian filled the questionnaire. The coefficient for parents'/guardians' highest level of education indicates that refugee students whose parents/guardians had more education tended to have higher GPA scores than refugee students whose parents/guardians had less education. The coefficient for parent/guardian involvement shows that refugee students whose parents/guardians were more involved in their education tended to have higher GPA scores than refugee students whose parents/guardians were less involved. The coefficient for teachers' expectations indicates that refugee students for whom teachers held higher expectations tended to do better in school than refugee students for whom teachers held low expectations.

In contrast to the primary level, school location was retained as a predictor at the secondary level. The coefficient for school location indicates that students in urban secondary schools tended to have higher GPA scores than refugee students in rural secondary schools.

4.3.3.5. Variance Explained

The variance explained by the six retained variables at Level 1 and the variance explained by the one variable retained at Level 2 for the parsimonious model are provided in Table 16.

As shown, nearly 80% of the variance at student level (Level 1) was explained by the six retained variables and nearly 90% of the variance at school level (Level 2) was explained by school location. Comparatively, the variance explained at the secondary schools' level is lower than the amount of variance explained at the primary schools' level (cf., Tables 11 and 16). This difference may be attributable to the screening of students that takes place at the end of Grade 8.

Table 16

Explained Variance: *Parsimonious Model*

Level	Initial Variance	Final Variance	Percent Variance Explained
Student	74.69	15.73	78.9%
School	6.15	0.72	88.2%

4.4. Summary of the HLM Results

Predictors of GPA common to primary and secondary schools were teacher expectations, students' self-efficacy, and parental involvement. At the student level, the parents'/guardians' level of education and family type were significant predictors of refugee students' academic achievement in secondary schools but they did not predict refugee students' academic achievement in primary schools. In contrast, students' grade level was important in predicting academic achievement of refugee students in primary schools but not in secondary schools. At the teacher/class level, teachers' years of teaching experience and teachers' self-efficacy predicted refugee students' academic achievement in primary schools but not in secondary schools. At the school level, school location predicted students' academic achievement, both in primary and in secondary schools. Overall students in urban schools tended to perform better than students in rural schools. However, it is important to note that although school location predicted students' GPA scores at both primary and secondary schools, it was not retained in the parsimonious model at the primary school level.

Chapter 5

Discussion

This chapter is divided into seven sections. The purpose of the research and a summary of the methods used to address the research questions are provided in Section 1. The results are summarized in Section 2. Section 3 contains a discussion of the results in terms of the literature reviewed in Chapter 2. The limitations of the study are presented in Section 4, followed by implications for practice and recommendations for future research. Finally, the last section presents the conclusions drawn from the results.

5.1. Research Purpose and Method

The purpose of the present study was to determine the relationship between the academic performance and a set of predictor variables with refugee students in primary schools (Grades 7 and 8) and in secondary schools (Forms 1 and 2) in Kenya. Bronfenbrenner's (1979, 2005) bio-ecological theory, Bandura's (1986, 1997) social cognitive theory, Kohl et al.'s (2000) theoretical model of parental involvement, which was developed from Epstein's (1995) theory of spheres of influence, Merton's (1948) self-fulfilling prophecy theory, and Jacobson and Rosenthal's (1968) theory of the "Pygmalion" effect were used to identify the following measured predictor variables: student self-efficacy, parent/guardian involvement, and teacher expectations at the student level, and teachers' self-efficacy at the teacher level. In addition, the following additional predictor variables were included: student age, gender, grade level, and family type at the student level; parent/guardian gender, age, level of education, and housing

status at the student level; teacher age, gender, qualifications, and experience at the class/teacher level; and school location at the school level. Academic performance was defined as the mean grade point average across the following five compulsory subjects: English, Mathematics, Science, Social Studies, and Kiswahili.

The current study utilized a sample of Grade 7 and 8, and Form 1 and 2 refugee students, their parents/guardians, and their teachers to examine the relationships between academic achievement and student-, teacher-, and school-level predictors. The data were collected from 400 students in 80 classes in 20 schools at the primary level and 400 students in 80 classes in 20 schools at the secondary level over a three-month period. Data were analyzed in two stages. First, preliminary analysis were conducted to establish the demographic characteristics of the participants and to understand the data. Second, an analysis of the responses to the measured variables was conducted. Third, given that students were nested within classes and classes were nested within schools, Hierarchical Linear Model analyses were conducted to address the purpose of the study. A 3-level HLM was used in the analysis of data for the primary schools. Since there was no variance at the classroom/teacher level for the secondary school data, a 2-level HLM was employed in the analysis of data for the secondary schools.

5.2. Summary of Results

First, an analysis of the responses to the measured variables revealed that all measures used in the present study had good reliability estimates. In addition, there were no floor or ceiling effects with the data (see chapter 4 for more details). However, subscales of both student and teacher self-efficacy questionnaires and the family involvement questionnaire were highly correlated in

the current study and only the full scale score was used. Second, a 3-level HLM was used to analyze data for primary schools and a 2-level HLM was used to analyze data for secondary schools (see chapter 4 for more details). Overall, the general conclusion from the analyses is that there are substantial associations between the student-, teacher-, and school-level predictors and student s' academic achievement. Results are summarized in the paragraphs that follow.

5.2.1. *Student Level*

Of the 11 variables entered at the student level, seven were retained at the primary school level and six were retained at the secondary school level in the final parsimonious model. At the student level, primary school level predictors are listed first, followed by the secondary school level predictors.

5.2.1.1. Primary

a. student gender: males outperformed females;
b. grade-level: Grade 8 students outperformed Grade 7 students;
c. student self-efficacy: students with higher self-efficacy outperformed students with lower self-efficacy;
d. parent/guardian gender: students with male parent/guardian who completed the questionnaire outperformed students with female parent/guardian who completed the questionnaire;
e. family type: students living with parents did on average slightly better than students living with guardians;

f. parent/guardian involvement in refugee students' education: students with parents/guardians who were more involved in their education outperformed students with parents/guardians who were less involved in their education;

and

g. teacher expectations: students for whom teachers held higher academic expectations performed better than students for whom teachers held lower academic expectations.

5.2.1.2. Secondary

a) student gender: males outperformed females;
b) student self-efficacy: students with higher self-efficacy outperformed students with lower self-efficacy;
c) parent/guardian gender: students with male parent/guardian who completed the questionnaire outperformed students with female parent/guardian who completed the questionnaire;
d) parent/guardian level of education: students with parents/guardians who were more educated outperformed students whose parents/guardians were less educated;
e) parent/guardian involvement: students with parents/guardians who were more involved in their education outperformed students with parents/guardians who were less involved in their education;

and

f) teacher expectations: students for whom teachers held higher academic expectations performed better than students for whom teachers held lower academic expectations.

5.2.2. *Class/Teacher Level*

Whereas there was explainable variance at the class/teacher level for the primary schools, there was no explainable variance at the class/teacher level for the secondary schools. One class/teacher variable was retained for the primary schools:

a. teachers' self-efficacy: students whose teachers had higher self-efficacy tended to perform better than students whose teachers had lower self-efficacy.

5.2.3. *School Level*

School location was the only variable considered at the school level and this variable was retained in the parsimonious model for the secondary schools but not for the primary schools. Overall, students in urban schools tended to outperform students in rural schools at the secondary level.

5.2.4. *Variance Explained*

The variance explained at the student, class/teacher, and school levels for the primary schools were, respectively, 83.5%, 99.8%, and 99.3%. The variance explained at the student and school levels for the secondary schools were 78.9 % and 88.2%.

5.3. Discussion of the Results

Consistent with Bronfenbrenner's (1979, 2005) bio-ecological model, the results supported the perception of co-occurring contexts that affect behavior. In other words, the microsystems (student, family, teacher, and school) and the mesosystem (interaction between family, teacher, and school) contexts played an important role in students' academic achievement. In line with Bronfenbrenner's theory, the variables are discussed beginning with student level predictors, which include family level predictors, followed by teacher level predictors, and finally the school level predictor.

Studies on individual, family, teacher, and school level factors have been mostly carried out in high-income countries. Most of these studies have focused on the majority population or on the ethnic minority groups and not on the refugee students. The few available studies examining refugee students' schooling in host countries have mostly focused on their challenges and have been qualitative in nature, and therefore have included only a few participants. The extent to which findings of the studies in high-income countries on different populations of students apply to low-income countries and to refugee students was not known; thus the current study fills this gap. As will be seen, some of the findings of the present study conducted in Kenya (considered a low-income country) on refugee students are similar to those reported in the previously conducted studies in high income countries on the majority students and on ethnic minority groups, suggesting that refugee students are no different from other students.

5.3.1. *Student Level Predictor Variables*

In the present study, five student level predictor variables of refugee students' academic achievement were common to primary and secondary schools. These variables included refugee students' gender, self-efficacy, parent/guardian gender, parent/guardian involvement in refugee students' education, and teachers' expectations of each refugee student.

In the present study boys tended to have higher average GPA scores than girls. This is not surprising because in Sub-Saharan Africa, for a long time, girls' education has been viewed as less important compared to the education of boys, thus discouraging the girls and by extension women from working as hard as boys in academics (Wright & Plasterer, 2012). As Pekkarinen (2008) indicated, in most low-income countries, families have tended to invest more in their sons' education than in their daughters' education, contrary to most families in high-income countries. This view is supported by Wright and Plasterer's (2012) qualitative study that found that the community they studied considered girls as means of income, who would drop out of school and be married off, who were entitled to be housewives. It is likely that the traditional view by some communities that the education of females is less important may have contributed to the gender differences in refugee students' GPA scores in the present study. For example, in rural parts of Kenya, girls are expected to take on domestic roles such as taking care of younger siblings, cooking for the family, and even taking care of their aging grandparents or great grandparents. These roles in turn prevent girls from taking advantage of the opportunity to study (see e.g., Wright & Plasterer, 2012).

The finding of the present study is similar to numerous studies in low-income countries that have

reported that male students tend to perform better than female students. Earlier studies found that male students perform better than female students in Mathematics and the Sciences and female students tend to perform better than male students in Languages and Art based subjects (e.g., Kahle, 2004; Moore & Slate, 2008). These studies are supported by Hungi and Thuku's (2010) study that examined gender differences in academic achievement in Kenya. Hungi and Thuku (2010) found a significant association between gender and students' achievement in Mathematics and English, with boys performing better than girls in Mathematics but not in English, except in one out of the eight provinces. Mensch and Lloyd (1998) found that girls' performance was poorer than boys' performance in the Kenya Certificate of Primary Education Exams (KCPE), overall. KCPE are composed of exams in five compulsory subjects (Mathematics, English, Science, Social Studies, and Kiswahili) that determine whether or not students get admitted to secondary schools. Mensch and Lloyd (1998) suggested that the poor performance of girls may be attributed to teachers' lower expectations of girls and traditional assumptions about gender roles.

While numerous studies in low-income countries have reported higher academic achievement of boys than girls, studies in high-income countries have found that females perform better than their male counterparts (see e.g., Gibb, Fergusson, & Horwood, 2008; Pekkarinen, 2008; Yazici, Seyis, & Altun, 2011) at different levels of education. For example, in New Zealand, Gibb et al. (2008) found gender differences in academic achievement, with females outperforming males on measures of educational achievement. They reported a consistent gender trend across a variety of measures of educational achievement including standardized tests, attainment of high-school qualifications, university attendance, and university degree attainment. Similarly, in Turkey,

Yazici et al. (2011) found that the academic success of female students was significantly higher than that of male students.

Findings from both high income and low-income countries suggest that gender differences in academic achievement can be attributed to culture (e.g., gender roles) ethnicity, and classroom behavior. For example, studies that have reported girls' educational advantage over boys have attributed this to classroom behavior where male students' disruptive behavior creates a gender gap (Gibb et al., 2008). In contrast, studies that have reported boys' educational advantage over girls have attributed this to culture and ethnicity where in some ethnic groups the education of boys is more valued than the education of girls; thus more is invested in the boys' education than the girls' education (Wright & Plasterer, 2012).

Consistent with previous studies (e.g., Kaprara et al., 2008; Klassen, 2010; Oikonomidoy, 2007; Usher & Pajares, 2006; Yazici et al., 2011), the findings of the present study provide support for the argument that students' self-efficacy is an important predictor of academic achievement as measured by students' GPA scores: students who had higher self-efficacy tended to have higher GPA scores than students who had lower self-efficacy. Muris (2001, 2002) found a strong association between students' outcomes and self-efficacy across the three domains of self-efficacy (academic, social, and emotional). Usher and Pajares (2008) asserted that students who lack confidence in their capability to self-regulate their learning are less likely to implement adaptive strategies, and more likely to give up in the face of difficulties. Yazici et al. (2011) examined the influence of students' self-efficacy beliefs on their academic achievement in Turkey and found student self-efficacy to be a strong significant predictor of academic

achievement. Similarly, Klassen (2010) examined self-regulatory efficacy among adolescents with and without learning disabilities (LD) and found that students with LD who scored low on self-regulatory efficacy were more likely to have lower end of term English grades than their higher-scoring counterparts. Similar findings have been reported in qualitative studies with refugee students. For example, Oikonomidoy's (2007) study of Somali girls and their education in the United States suggested that the girls expressed high self-efficacy for learning school subjects, as manifested in their high motivation, aspirations, and determination amidst frustrations. Additionally, the girls' responses to their peers' and teachers' negative comments about their way of dressing and religion suggests that possessing high emotional self-efficacy was what kept them going.

As Bandura (1986, 1994, 1997) noted, self-efficacy beliefs can influence the course of actions students may choose to undertake, the amount of effort they put into given tasks, how long they can persevere in the presence of difficulties, and their resilience to difficult circumstances. Refugee students, as a group, experience many challenges such as learning a new language in a new host country, interrupted schooling, discrimination, harassment from police, financial difficulties, and living in tents or in make shift shelters (e.g., in refugee camps) rather than houses. More recently, Kenya has experienced attacks from terrorist groups (so far slightly over 80 explosions targeting shopping malls, public transport vehicles, and churches). Regrettably, whenever this has happened, refugees have been the first suspects because they bear the label "refugee." Further, in an attempt to curb insecurity in Kenya, most refugees, regardless of their age or immigration status, were recently rounded up and taken to over-congested camps. Such experiences are destabilizing to the family members, which in turn can affect negatively the

refugee students' self-efficacy and sense of worth. Indeed, hardships such as these may cause students with low self-efficacy to develop negative thoughts, think of a task's demands as threatening rather than challenging, set low expectations for themselves, and eventually give up (Bandura, 1977; Bandura et al., 2001). Those who give up may end up in a state of *anomie* – a situation that makes people turn to using illegitimate means of achieving goals if the society sets goals and means of achieving goals but blocks the means of achieving the set goals (Merton, 1948). For refugee students to succeed in school, their self-efficacy must be high enough to allow them to self-reflect, exercise control, and set high goals and standards.

According to Bronfenbrenner's (1979, 2005) theory of human development, the family is a very important ecology within which development of a child takes place, thus the emphasis of family factors that interact with the individual (student) factors in influencing students' academic achievement. Such family factors include the gender of the involved parent. Differences in parent gender have been noted on various measures including measures of parental involvement, parents' level of education, and even parental expectations of their children in education. Interestingly, the HLM analysis in the present study found that students with a male parent/guardian who completed the Family Involvement Questionnaire tended to have better grades than students with a female parent/guardian who completed the Family Involvement Questionnaire. This is perhaps not surprising because the choice of who completed the questionnaire for the child may have been partly influenced by culture. In many cultures in Africa, including Kenya, culturally the bright children belong to the father and the other children (who are not as bright) belong to the mother. In reality, fathers often derive pleasure in being associated with children who do well in school, leaving those who don't do well at the mercy of

their mothers and significant others. It is therefore possible that fathers chose to complete questionnaires for their children who were doing well in school, and mothers completed the questionnaires for the children who were not doing very well.

Additionally, gender differences may be attributed to the families' socio-economic status. Numerous studies have found that students from higher SES backgrounds tend to perform better than those from lower SES backgrounds (Baker, Goesling, & LeTendre, 2002; Shimada, 2010). Preliminary analysis revealed a significant association between parents'/guardians' gender and housing status, with more male parents/guardians (n = 248) living in permanent houses than female parents (n = 110) and more female parents residing in semi-permanent houses (n = 349) than male parents/guardians (n = 93). In Kenya, families living in semi-permanent houses are mostly from low socio-economic backgrounds. Hungi and Thuku (2010) examined differences in students' academic achievement in Kenya and found that students from homes with better quality houses performed better in English and Mathematics than students from low quality houses. In the present study, the GPA scores for refugee students living in permanent houses (M = 69.84, SD = 6.96) was considerably higher than for students living in semi-permanent houses (M = 60.32, SD = 6.76). Therefore, although the HLM analysis study did not find a significant association between housing status and students' GPA, it is possible that when parent/guardian gender was included in the model, it was more important in predicting GPA scores than housing status.

Higher SES of male respondents may have affected the students' GPA scores in other ways as well (Codjoe, 2007). Hungi and Thuku (2010) found that students from homes with many

possessions (more property/assets) performed better in Mathematics and English than students from homes with few or no possessions. Parents with more possessions are able to provide a better home environment for studying as well as materials such as books that can facilitate children's academic success. They are also capable of providing their children with tutors who can coach them in subjects that they need help with. In contrast, parents with few assets may not be able to provide their children with the basic needs, and this is when children become vulnerable to child labor to the extent that they become incapable of doing well in school.

The education level of parents may also explain why there were gender differences among parents/guardians who completed the questionnaires. Numerous studies have found a significant association between parents' level of education and students' academic achievement. The education of females has been traditionally viewed as less important in sub-Saharan Africa and, therefore, many female parents and guardians may have been either illiterate or semi-literate (Filmer, 2005; Wright & Plasterer, 2012).

Further, preliminary analysis revealed that most male parents/guardians were in the more involved group of parents. Chi-Square tests revealed differences in the type of involvement by gender. In the more involved group, only one respondent was a female and 207 were male. In the less involved group, 458 were female and 134 were male. This clearly demonstrates that the male respondents were more involved in their children's education than their female counterparts.

The connection between parental involvement and children's academic achievement is an area that has captured the attention of many educators and researchers due to the important role it

plays in the field of education both among younger and older children (Epstein, 1995; Seginer, 2006). The present study examined the association between parental involvement and students' academic achievement. The findings are consistent with previous studies that found parental involvement to be a predictor of students' academic achievement (see e.g., Fan & Chen 2001; Hill & Craft 2003; Jeynes, 2003, 2007). In the present study, parents/guardians level of involvement in their children's education was positively associated with students' GPA scores. This finding supports Epstein's (1995) theory, which suggests that when family members (parents/guardians) are involved in their children's education, these students tend to be academically more successful. Epstein (1995) suggested that if parents participate in their children's educational activities at home and at school, children perform better academically. In a meta-analysis of the effects of parent involvement on minority students' academic achievement, Jeynes (2003) found that parental involvement (such as communicating with the school, checking homework, encouraging outside reading and participating in school activities) benefited African American and Hispanic/Latino students. In a later study, Jeynes (2007) found a significant association between parental involvement and secondary school students' academic achievement, which held for both White and minority students, suggesting that parental involvement affects students' academic achievement regardless of their ethnic backgrounds.

The few studies that have examined the relationship between parental involvement and academic achievement with immigrant and refugee students have been mostly qualitative (e.g., Dumbrill, 2008; Lewig, Arney, & Salveron, 2010; McBrien, 2011; Tadesse et al., 2009; Walker-Dalhouse & Dalhouse, 2009). Sarroub et al. (2007) reported a case study of a single refugee student, and their study indicated that lack of parental support and involvement negatively affected the

refugee student's school performance. Similarly, Walker-Dalhouse and Dalhouse (2009) noted some miscommunication and misunderstanding between teachers and refugee parents to have negative effects on the Sudanese refugee students' schooling experiences. According to Bronfenbrenner's (1979, 2005) bio-ecological theory, if there is a breakdown in the microsystems, the child will not have the means to navigate the environment, thus the saying, "When two elephants fight, the grass suffers." Codjoe (2007) found parental involvement in the form of providing materials and encouraging their children to do well to be positively related to children's success in Canadian schools. Most of the qualitative studies agree that parental involvement is important in children's academic success. Most importantly, parental involvement activities such as communicating with school authorities including teachers, helping with homework, and discussing school work with children have been found to be important in facilitating the school success of refugee children. However, some qualitative studies have cited barriers to parental involvement, including misunderstanding between teachers and parents, perceived poor policies in host countries that encourage indiscipline among children, language barriers, and cultural differences. In some studies, it was observed that refugee parents perceived that schools and police encouraged the children to challenge parents' authority, which then became an obstacle to parental involvement. In the present study, parental involvement was positively associated with refugee students' academic achievement. Although qualitative studies examining refugee students' academic achievement in high-income countries have been done on a small scale, their findings are similar to the findings in the present study. It can therefore be concluded that refugee students in low-income countries are not different from students in high-income countries in this respect.

Teacher expectations and their influence on student academic achievement have been the focus of a myriad of studies in high-income countries. The theory of the self-fulfilling prophecy has been used to explain the influence of teacher expectations and perceptions on students' achievement. Most importantly, empirical studies testing the self-fulfilling prophecy theory have reported different conclusions (see e.g., Fergusson, 2003; Jussim & Harber, 2005; Rubie-Davies, 2006). The present study revealed a significant association between teacher expectations and students' academic achievement, indicating that teacher expectations for their students' academic ability often matches the students' actual attainment. Consistent with previous studies, when teachers held high expectations for their students, the students' achievement tended to be high; in contrast, when teachers held low expectations of their refugee students, the students' achievement tended to be lower. Numerous studies indicate that teacher expectations can facilitate students' academic achievement, just as much as they can hinder students' academic progress (see e.g., Rubie-Davis, 2010; Trouilloud et al., 2002). Several studies in the Western countries (e.g., Harlin et al., 2009; Jacobs & Harvey, 2009; Riley, 2012; Rubie-Davies, 2006; Strand, 2010) have found that teachers hold lower expectations for ethnic minority students than for their non-minority counterparts, which then negatively affects minority students' performance. Likewise, the findings of qualitative studies have indicated a similar pattern when teachers hold lower expectations for minority students, including refugee students. For example, Tadesse et al. (2009) noted that African refugee parents believed that teachers had low expectations of their children and did not challenge their children enough. Walker et al. (2009) found similar results where parents of refugee students expressed concerns about the teachers' low expectations of their children resulting from stereotypes about the academic inferiority of

blacks. The present study was cross-sectional in nature and did not permit a follow up of participants after a one-point data collection; it is therefore difficult to tell if teachers held low expectations of specific refugee students basing on their stereotypes or because of their prior academic performance.

Students' grade level and family type were associated with refugee students' academic achievement in primary schools but not in secondary schools. Grade 8 students attained higher GPA scores than Grade 7 students. Preliminary analysis revealed differences in academic achievement between students from lower grades (Grade 7 and 8) and those from higher grades (Form 1and 2). Studies have suggested that differences in students' academic achievement at different grade levels depend on children's own characteristics. For example, Zimmerman and Martinez-Pons (1990) examined differences in gifted students' self-regulated learning that were important in explaining students' verbal and mathematics self-efficacy. They reported that on measures of self-regulatory learning, students from grade 11 surpassed students in grade 8, who in turn surpassed students in grade 5. Other studies have found that children's self-perceptions of competence decline with the grade level from the time a student starts school through high school (Benenson & Dweck, 1986; Stipeck, 1981), with the most remarkable drop happening during high school.

In Kenya, students in Grade 8 are prepared for a national exam (KCPE) that determines the students' entry and transition into secondary schools. Grade 8 teachers do everything possible to ensure that their students perform well since success or failure of students is taken as a reflection of the teachers' work. Teachers whose students fail the KCPE risk being demoted or transferred

to poor performing schools. Additionally, parents are aware that if their children fail the KCPE, their children cannot enter Form 1. Parents, therefore, do everything it takes, including hiring specific subject tutors to coach their children, with the hope that their children will secure good grades that will enable them to enter Form 1 in a better secondary school. It is therefore perhaps not surprising that students in Grade 8 had better grades than students in Grade 7. There was no difference between the average GPAs of the students in Form 1 and the students in Form 2. In Kenya, students in Form 1 and 2 do not sit for National Exams. Therefore, teachers and parents may not put pressure on them to work as hard as when they are in Grade 8. This may likely explain why a student's grade level did not predict academic achievement at the secondary school level.

Family factors have been found to influence children's academic achievement both negatively and positively. In the current study, students living with a parent or parents tended to have higher GPA scores than students living with guardians. Due to scarcity of family resources among many families in Africa, many parents may opt to channel the few available resources they have towards the education of their own children rather than children who are under their guardianship. Besides, guardians may not treat children under their care the same way parents may treat them. For example, in a study conducted in Kenya, Kimani et al. (2012) found that children living in institutions of care were doing better academically than those who were living with relatives (guardians). The differences in academic achievement were attributed to mistreatment of children by guardians. Poor performance of children living with guardians has also been attributed to lack of resources to support the children. For example, Nyambedha et al. (2003) found that children who were orphaned and lived with older relatives resorted to child

labor for a living. Child labor can have detrimental effects on children's schooling by affecting the child's school attendance as well as classroom concentration and attention (see e.g., Guarcello & Rosati, 2008).

At the secondary school level, the level of parent/guardian education predicted GPA, but not at the primary school level. Studies examining students' academic achievement have consistently shown that parents' level of education is important in predicting children's academic achievement (e.g., Davis-Kean, 2005; Halle et al., 1997; Haveman & Wolfe, 1995; Oreopoulos et al., 2006). Parents' level of education is a key component of a family's SES. Families of lower SES tend to have parents with lower education levels. Therefore such parents may have fewer resources with which to help their children succeed academically (Sandefur et al., 2005). Halle et al. (1997), using a sample of low-income families, found that mothers with higher education had higher expectations for their children's academic achievement and that the expectations were related to their children's subsequent achievement in math and reading. In the present study, HLM results revealed a statistically significant positive association between parents'/guardians' level of education and students' GPA scores at the secondary school level. The association between parents'/guardians' level of education and academic achievement at the secondary level may be attributed to the fact that students in secondary schools encounter challenges with the complex curriculum where parents'/guardians' level of education comes into play. At the primary school level, the curriculum is less complex and even parents/guardians with less education can help their children with their homework.

5.3.2. *Teacher Predictor Variables*

Quantitative studies examining the impact of teachers who teach refugee students and their self-efficacy as it relates to academic achievement are rare, thus the present study contributes to the quantitative literature in the area of refugee studies. Findings from the present study echo the general consensus of previous studies (e.g., Karabenick & Noda, 2004; Klassen, 2010; Navidinia et al., 2009); teachers' self-efficacy predicted refugee students' GPA scores at the primary school level. At the secondary school level there was no variance to explain hence the teacher level model was dropped. Substantial research supports the argument that self-efficacy is a fundamental component in human accomplishments in a wide variety of settings, and especially in education (Bandura, 1997). Research has demonstrated that teachers' sense of self-efficacy plays a key role in students' academic achievement (Klassen et al., 2009). Teachers with high self-efficacy have been found to use appropriate and effective instructional strategies, manage their classrooms well, and engage their students in learning (Klassen & Chiu, 2010). Several research studies have found that teachers' self-efficacy influences their teaching behavior, and this in turn influences their students' academic achievement (Skaalvik & Skaalvik, 2007; Schannen-Moran & Woolfolk Hoy, 2001). Teachers' sense of self-efficacy has been linked to student outcomes in a number of studies showing that students whose teachers score high on self-efficacy do better on standardized tests than their peers taught by teachers with lower self-efficacy scores (Gordon, 2001; Henson, 2001; Muijs & Reynolds, 2002). Teachers who lack self-efficacy are said to have lower expectations of students, cast blame on students when things do not go as planned, and have a negative outlook about student learning and their behavior (Ferguson, 2003; Gordon, 2001; Scharlach, 2008).

Teachers with low self-efficacy may experience greater difficulties in teaching refugee students, and especially those who display disruptive behavior. Disruptive behavior displayed by refugee students may be a result of coming from backgrounds of interrupted schooling, language difficulties, and different cultural beliefs, and they may have gone through other traumatizing experiences such as losing their loved ones in wars. Such students may need special attention and support from teachers. Karabenick and Noda (2004) revealed that teachers who displayed more positive attitudes towards having English Language Learners (ELLs) in their classrooms held higher self-efficacy beliefs for teaching these students compared to teachers who held less positive attitudes towards having ELLs in their classes. Siwatu (2007) reported a lack of teachers' self-efficacy among the pre-service teachers' ability to communicate effectively with English Language Learners. In a study of teachers of refugees, Szente et al. (2006) found that teachers often felt overwhelmed to teach academic content to refugee children while not neglecting their responsibility to teach the other 20-25 children in their class. The present study found a positive association between teachers' self-efficacy and refugee students' GPA in primary schools, suggesting that teachers in this study were confident in teaching refugee students. It is also possible that teachers in the present study had more positive attitudes towards having refugee students in their classrooms and were able to use appropriate classroom management techniques, engaged students in the learning, and used suitable instructional strategies.

5.3.3. *School Predictor Variables*

Only one variable was considered at the school level, namely the location of the school. At the

secondary level, refugee students in schools in urban centers tended to have higher GPA scores compared to refugee students in rural schools. In contrast, and somewhat surprising given previous research, location of school did not predict GPA at the primary level in the parsimonious model. Alone, school location was a significant predictor of student GPA at the primary level, but when considered with the six variables at the student level and the single variable at the class/teacher level, school location was not significant. Taken together, the set of six variables at the student level and the single variable at the class/teacher level and the relationships among the variable at the three levels accounted for the variance attributable to school location at the third level for the primary schools.

Researchers examining rural and urban differences in students' academic achievement have found contrasting results. For example, using data from the U.S. National Longitudinal Study of 1988, Fan and Chen (1999) found that students from rural schools outperformed their urban counterparts in math, science, reading, and social studies. It has been argued that schools in rural settings may perform better because they tend to be smaller and have smaller classes hence paving way for teachers to pay attention to each student. In contrast, Zhang (2006) found that rural students lagged behind their urban counterparts in reading and attributed the difference to the lower socio-economic status of families of rural students. Additionally, in an analysis of 24 industrialized countries participating in the Economic Cooperation and Development study of the literacy performance of 15-year old students, Williams (2005) found that rural students scored significantly lower in math than their urban counterparts in 14 countries. Young (1998) used multilevel modeling techniques to examine rural and urban differences in student achievement in science and mathematics in Western Australia. Young (1998) found a significant association

between school location and students' academic achievement in mathematics and science, with students attending urban schools outperforming their rural counterparts. In Kenya, Kiumi, Kibe, and Nganga (2013) examined the influence of school location on students' academic achievement. They found that students from urban schools performed better than students in rural schools in KCPE examinations. They attributed the differences in performance to urban schools being generally advantaged in terms of accessibility to adequate learning resources and favorable parental stimulation.

For the most part, the difference in academic achievement between rural and urban schools may be attributed to differences in SES of families, school size, supervision of teachers, availability of instructional materials and human resources, and quality of teachers. For example, in Kenya, in contrast to urban schools, most rural schools are rarely visited by school inspectors or quality assurance officers who are in charge of monitoring and evaluating teaching due to the distance the schools are from education offices and the lack of funding to travel to these schools. In some schools in remote areas, the officers appear once a year to deliver the National Exams to schools. Consequently, teachers in rural schools are less likely to get much needed supervisory advice from their professional seniors, which is particularly needed given the finding that rural schools, in contrast to urban schools, tend to have more untrained or unqualified teachers (Mulkeen, 2008). Moreover, due to lack of attractive amenities (e.g., good houses, clean water, electricity), a significant proportion of teachers posted to rural schools either apply for transfer immediately or become chronic absentees (Otieno, 2010). This makes it difficult for rural schools to keep classrooms adequately staffed. For example, more recently, the police officers who were deployed to provide security in Trukana county – a rural region prone to cattle rustling, had to

take up teaching duties because of the acute shortage of teachers in the school (Mbilu, 2014). Added to that is the lack of facilities in most rural schools. For example, a 1988 World Bank report observed that, in contrast to urban schools, most rural schools in Africa were characterized by dilapidated buildings, missing or broken desks and chairs, and a lack of good ventilation and sanitation facilities (World Bank, 1988). Further, in some rural schools, students sit on stones and learn under trees. The World Bank report noted these circumstances had the effect of discouraging school attendance and hampering schools' efforts to enhance student learning.

Additionally, unlike students in urban centers who tend to concentrate on education, students in rural areas may be forced to work on their parents' farms and spend time selling farm products (Mulkeen, 2008). Further, it has been observed that rural schools face challenges relating to isolation, poverty and limited job opportunities for school leavers. Isolation denies rural schools the advantages of urban-based resources such as libraries, electricity, and access to technology to enhance learning (Capper, 1993). The poverty of many rural communities limits parents' ability to provide for their children and to supplement their children's education with resources at home that can sustain interest in learning in the absence of the teacher. Bickel and Lange (1995) asserted that because of limited employment opportunities, learners in rural areas do not see any financial benefits to attending or succeeding in school. Consequently, most rural learners end up performing poorly on the Kenya Certificate of Primary Education (KCPE) and Kenya Certificate of Secondary Education (KCSE) exit examinations, thereby limiting their opportunity to move up the education ladder and enter a tertiary institution.

5.4. Limitations of the Study

Although the findings of the current study are compelling and add to a growing body of literature in the area of studies of refugee students' academic achievement, there are some limitations that should be mentioned. First, the current study used self-report instruments to measure student self-efficacy, parent/guardian involvement, teacher expectations, and teachers' self-efficacy. One of the weaknesses of using self-report measures is that respondents may overestimate or underestimate their capability in certain domains. Thus qualitative data in the form of interviews and actual observations would have enriched the study. For example, when examining teacher expectations, group specific differential treatment can be observed in the class, and such observations are interesting not only for the purposes of research but also for the coaching of teachers. In future studies it would be desirable to use complimentary methods to minimize possible bias resulting from self-report.

Second, the sample from only schools in Nairobi and its outskirts limits the extent to which the results can be generalized. The results in the current study therefore need to be corroborated in different samples including samples from schools in remote areas and the refugee camps.

Third, the study used Hierarchical Linear Modeling approach in the analysis of data. However, HLM has several limitations. HLM does not provide tests of the appropriateness of aggregation or nonaggregation. Without evaluating the appropriate level of analysis for variables and relationships, researchers may mistakenly aggregate individual level data to the group level and use it to draw inferences about groups. Alternatively, researchers may inappropriately use individual level data that should be aggregated to the group level. Results may thus be missed,

misidentified, or misinterpreted. Additionally, HLM restricts the dependent variable to be operationalized at the lowest level of analysis. The weakness associated with this requirement is that it limits the applicability of the method to theories that hypothesize the dependent variable at a lower level of analysis. Compared to most statistical methods, HLM is relatively new and various guidelines for HLM are still in the process of development. Additionally, users of HLM employ multiple ways of interpreting results, with some choosing to use points, others t-ratio, and others units and therefore a lack of clear ways of interpreting results may pose a challenge.

Fourth, the study was limited to refugee youth of ages 12-24 years who were in Grades 7 and 8 and Forms 1 and 2, and who had lived in Kenya for between 5 and 20 years. Thus, the results of the study may not be applicable to refugee students whose ages and grades fall outside of this bracket, and who have lived in Kenya for less than 5 years or more than 20 years.

Fifth, the data collected in the study were collected at one time point. For example, teacher expectations were measured at a single time and the results confirmed the self-fulfilling prophecy and the Pygmalion effect. However, the concurrent nature of the data does not allow any conclusions as to the directions of the effect. To better measure change across age and grade, a longitudinal study is needed.

Sixth, the lack of resources prevented collection of data from all the refugee students in each class and from non-refugee students in the same classes. Therefore there was no comparison or control group. Further, data were not collected from some parts of the country that were only accessible by helicopter due to the high cost of renting a helicopter and/or due to security threats from terrorists, especially Al-Shabaab-a section of Al-Qaeda militant group. It was difficult to

identify the refugee students who were legally registered to be in Kenyan schools from those who were not legally registered. Most of the principals of schools who had refugee students in their schools admitted to have accepted refugee students to their schools on humanitarian grounds even though the refugees did not have legal papers. Some of the refugee students and families in urban schools were therefore hesitant to participate in the study for fear of being identified, rounded up, and returned to the refugee camps.

Seventh, this study investigated the impact of family structure (family type) on refugee students' academic achievement, but the study did not ask if families had a single parent or two biological parents. Rather, the study investigated the general family structure in terms of parents and guardians. The results are therefore limited to the general structure of the family and need to be interpreted with caution. Future studies should consider including single-parent families and two-parent families.

Eighth, due to high correlations among subscales for student self-efficacy, parental involvement, and teachers' self-efficacy scales, the subscales for each of the measures were combined into one measure each. For example, the self-efficacy scale for students had three subscales, which were combined into a single scale to measure self-efficacy for students. Given that self-efficacy is argued to be domain specific, results from the use of a single combined scale need to be interpreted with caution, as it may be difficult to tell the domain in which students had high or low self-efficacy. This also applies to the parent/guardian involvement scale; it may be difficult to tell in which activities of parent/guardian involvement parents/guardians were involved most or the least. Additionally, it may be difficult to tell the domain of self-efficacy in which teachers

had higher or low self-efficacy since the three sub-scales were combined into a single scale. Future studies should consider developing better measures of self-efficacy in distinct domains to.

Ninth, the current study examined the association between students' self-efficacy and academic achievement and academic achievement as measured by GPA. However, GPA is an average of several academic subjects and it is not domain specific. Future studies may consider using domain specific areas of academic achievement rather than GPA.

Tenth, the present study collected only quantitative data from the participants, thus limiting participants from expressing their views in greater detail. Finally, the results of the study are limited to refugee students in Kenya. Care must be exercised in generalizing the results to refugee students in other countries.

5.5. Implications for Practice

Despite the limitations, the results of the current study have important implications for policy and program interventions aimed at improving the academic achievement of refugee students. The results of the current study may provide a rich source of information for students, teachers, parents, and other decision makers in various ways. For example, the findings may help decision makers as they make strategic judgments to allot financial resources and plan programs to improve the quality of education for refugee students in their schools. Parents/guardians, teachers, and school administrators may benefit from the findings as they seek ways of improving their students' achievement. The findings of the present study should be considered by the government of Kenya through various ministries including the Ministry of Education,

Science and Technology, the Ministry of Culture and Social Services, the Ministries of Planning and Economic Development, the Ministry of Devolution and Planning, the Ministry of Finance, the Ministry of Labor and Human Resource Development, and the Ministry of Security and Internal Affairs. The findings should also be considered by the teacher training colleges, universities, and the Teachers Service Commission (TSC). Additionally, the findings should be considered by non-governmental organizations (NGOs) including the UNHCR, and World Vision, and the international educational community in terms of understanding the educational needs of refugee students as well as factors that influence these students' academic achievement.

In Kenya, the TSC is charged with the responsibility of hiring and deploying teachers both in rural and urban schools. Given the findings that students in urban schools tend to outperform their peers in rural schools, the TSC should work in collaboration with the Ministry of Devolution and Planning as well as the Ministry of Finance to ensure that rural schools are well staffed with trained and qualified teachers. The TSC should also devise methods of attracting and retaining trained and qualified teachers in rural schools. Currently, teachers working in hardship areas in Kenya earn a special allowance at the rate of 30% of their basic salary. Revising this allowance upwards and extending it to teachers in all rural schools may help attract and retain teachers in these areas, which may in turn narrow the gap in academic achievement between rural and urban schools.

The Ministry of Education, Science, and Technology through its different departments should recognize that teachers are the implementers of the curriculum at the ground level and should therefore involve these important stakeholders in formulating policies that are realistic and

achievable within a certain time frame. Most importantly, the findings should be shared with principals, practicing teachers, and parents/guardians in terms of understanding ways and means for facilitating academic success of refugee students. For example, teachers should be encouraged to hold each refugee student to high, but attainable and realistic expectations. School teachers and administrators, on the other hand, should do more to involve family members in their children's education. For example, a school-wide parent-teacher-student organization or the use of homework and other assignments that require parent-child interaction can be created to serve as structures to promote communication, thus influencing students' achievement. The Ministry of Education, Science, and Technology through its various departments should devise ways of supporting teachers in order to improve their self-efficacy for working with students with diverse needs. Self-efficacy can be improved through having a supportive quality assurance team that facilitates teachers in identifying the sources of self-efficacy such as mastery experiences, vicarious experience, social persuasion, and emotional reaction to stress (Bandura, 1994). Retaining teachers in the teaching profession will help them gain mastery experiences that result from practice. To facilitate vicarious experiences, teachers need role models and/or teacher mentors especially for novice teachers. Most importantly, the government of Kenya should devise ways of making the teaching profession more attractive so that teachers are motivated to stay in the profession. One way is to lessen competition between rural and urban locations so that when there are differences in academic achievement, teachers are not blamed. Previously, teachers have been blamed for students' poor performance in rural schools without considering that other factors could interact to influence students' outcomes. Another way of making the teaching profession attractive is to improve teachers' salaries and remuneration. The government

spends a lot of money in teacher training and therefore retaining the trained teachers is one way of mitigating the shortage. A lot of times skilled teachers quit the profession due to poor salaries to seek jobs abroad leading to brain drain. It is important for the government of Kenya to devise ways of mitigating brain drain.

Teacher training colleges and universities should work together with the Ministry of Education, Science, and Technology in providing in-service courses to teachers as well as professional development opportunities. The inspectors of schools working under the Ministry of Education, Science, and Technology should not go to schools to find faults among teachers and harass teachers but rather to encourage teachers so that they can feel they have the necessary skills and capabilities to succeed (social persuasion). Teachers need to learn to react positively to stressful situations knowing that success in teaching requires coping positively with stressful situations, especially if one teaches students from diverse backgrounds. Generally, the teacher training colleges and universities need to incorporate inclusive education in the curriculum, with special emphasis on at-risk students, including refugee students. Teacher training colleges and universities should ensure that the trained teachers are less biased and non-judgmental towards their learners regardless of their learners' cultural backgrounds.

The Ministry of Security and Internal Affairs and the Ministry of Culture and Social Services should work closely with the Ministry of Education, Science, and Technology as well as the NGOs in acknowledging that Kenya is a multicultural country and therefore all cultures should be appreciated and celebrated rather than condemned. Cultural aspects whereby women "were to be seen but not heard" need to be changed to alter the aspirations of female students.

Parents/guardians need to treat male and female children equally without sacrificing one for the good of the other. The Kenyan society as a whole should encourage male and female parents to participate in their children's education equally regardless of the grade level or prior performance of their children. Besides, schools should embrace, develop, and implement Epstein's (1995) framework of parental involvement that emphasizes collaboration among partners (family, community, and school). Additionally, principals of schools should ensure that students in rural schools are exposed to an urban experience and students in urban schools are exposed to a rural experience through exchange programs. Principals of schools, teachers, and parents should work towards improving self-efficacy among refugee students since self-efficacy can be created and developed (Bandura, 1997).

Teacher training colleges and universities should embark on recruiting student teachers from rural areas who are willing to return to the rural areas following completion of their teacher education and training programs. In order to attract and retain teachers in rural schools, the government of Kenya, through the Ministries of Planning and Economic Development and the Ministry of Transport and Communication, should ensure that good housing, clean water, roads, and electricity are put in place. Good roads can facilitate the smooth transportation of materials and services to rural areas. Further, the Ministry of Education, Science, and Technology through its various departments should work collaboratively with the Ministry of Devolution and Planning to ensure that equal professional development and advancement opportunities for teachers in rural and urban areas are provided.

Most importantly, the government of Kenya needs to have the goodwill to develop and implement policies that govern the education of refugee students. This will help in easing identification of the refugee students in schools so that educators can accord the refugee students the help that they need for succeeding in education. Additionally, the government and non-governmental organizations need to work together to ensure that refugee students, and by extension refugee families, are given legal papers in good time so that the students' schooling is not suddenly interrupted whenever there is a security screening resulting from sudden terror alerts, as it has been in the past. Again, issuing the refugee families with legal papers will enable parents and/or guardians to be free in getting involved in their children's education especially in schools. Without legal papers, and especially legal papers that allow refugee families to live in urban centers, refugee parents/guardians who live in urban centers illegally will not feel free to participate in school functions for fear of being arrested.

5.6. Recommendations for Future Research

Based on the results of the present study, and given the limitations cited, the following recommendations are suggested:

1. A more representative sample of schools drawn from all the regions in Kenya could be examined to ensure external validity of the self-efficacy, parental involvement, and teachers' expectations scales.
2. The study should be replicated with a larger, more representative sample of schools, and include (a) a representative sample of non-refugee students to act as controls; (b) an expanded set of variables, especially at the classroom/teacher and school levels, and (c)

include interviews of students, parents/guardians, and teachers to gain further explanatory information to aid in the discussion of the results;

3. A longitudinal study should be conducted to clarify the direction of effects observed in the present study;
4. The study should be replicated in other low-income countries with large populations of refugee students;
5. A study should be conducted to examine which home-based and school-based activities refugee parents are involved in and which specific activities predict students' academic achievement;
6. A study should be conducted to examine the effects of a) single families and families with both biological parents on the academic achievement of refugee students, and b) the effect of the absence of a father figure on refugee students' academic achievement; and
7. Examination and evaluation of policies that govern the education of refugee students in both rural and urban schools should be undertaken.

5.7. Conclusions

The purpose of this study was to examine predictors of refugee students' academic achievement in primary and secondary schools in Kenya that is considered a low-income country. The study found that predictors of refugee students' academic achievement in Kenya are no different from predictors of other students' academic achievement in high-income countries. The findings suggest that in the measures used, refugee students in Kenya are no different from other students in high-income countries. Given that all the participants had been in Kenya for a minimum of

five years, it is possible that the results would not be the same if more recent refugees would be studied, or if different predictors of academic achievement were examined.

Further, results of the current study suggest that the gender gap still exists. Eliminating differences in education between males and females has been a priority of development organizations and the international community for many years. The Millennium Development Goal (MDG) that aims to eliminate gender disparity in all levels of education no later than 2015 is echoed by institutions such as the United Nations and the World Bank. In fact, according to World Bank, there is no investment more effective for achieving development goals than educating girls: "Educating a girl child is educating the whole village." It has been suggested in the literature that educating girls and achieving gender equity will lead to a range of improved outcomes for low-income countries (Schultz, 2002), including higher economic growth (Abu-Ghaida &Klasen, 2004). There is a need for a more in-depth study on factors that predict girls' academic achievement in particular and how to best facilitate reduction of the gender gap in educational achievement.

Particular attention should be paid to the variables that can be manipulated and were identified in this study as influencing the performance of refugee students in Grades 7 and 8 and in Forms 1 and 2 in Kenya. These variables include teacher expectations of the academic abilities of refugee students, parent/guardian involvement in their children's education, student self-efficacy, and teachers' self-efficacy. Low levels of teacher expectations, student self-efficacy, parent/guardian involvement, and teachers' self-efficacy result in low levels of academic achievement. Involving parents/guardians of refugee students in the education of their children is very important to the

academic success of these students. Similarly, measures taken to improve teachers' self-efficacy in terms of working with refugee students are likely to lead to better educational outcomes of their students. This is evident in the literature as well as in the results of the current study.

Despite the fact that there were several limitations, the quantitative non-experimental nested design used in the current study provides some of the first evidence of how student self-efficacy, teacher expectations, parental involvement, and teachers' self-efficacy may affect refugee students' academic achievement especially in low-income countries. Most importantly, variations across student self-efficacy, teacher expectations, parental involvement, and teachers' self-efficacy factors are consistent with bio-ecological theory (Bronfenbrenner, 1979, 2005) that posit that adolescent development occurs not in isolation within one context (such as family) or another context (such as school) but within an interconnected system, including family and school. These findings suggest that if we are to understand factors that may predict refugee students' academic achievement, it is important to examine aspects of the student, parent, classroom/teacher, school, and demographic contexts, as well as the relations among them. Given the findings, it is strongly suggested that an ecological approach which encompasses student-, family-, teacher-, and school-level variables be considered when examining predictors of academic achievement; an ecological model allows for a complex examination of multi-factor characteristics associated with achievement (see Schreiber, 2002). In addition, policy and interventions geared towards improving academic achievement should take into consideration the effect of student-level, teacher/class-level, and school-level factors on students and their ability to be successful.

In summary, the findings of the current study add empirical evidence of the factors that predict students' academic achievement. In addition to its theoretical contribution, this study has a methodological significance. Studies using students as subjects have traditionally been conducted using students as the unit of analysis ignoring the effects of classrooms/teachers and schools on some students' characteristics. Researchers have realized the importance of taking into consideration the multi-level nature of most school data. This study adds to the increasing research evidence of the advantage of recognizing the hierarchical structure of most social institutions and use of the appropriate research design and statistical analysis of data emanating from such institutions.

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Appendixes

Appendix A: Student Questionnaire

Instructions: This questionnaire contains questions and/or statements that you will be required to read carefully and respond to. By responding to the questions or statements, you are consenting to participate in this study. Please feel free to respond only to the questions that you are comfortable with. Where there are two or more options, please circle only one option.

Demographic Information

Age				
Gender **(Circle one)**	M		F	
Name of country where you come from				
Class/Grade level **(Circle one option)**	7	8	Form 1	Form 2
Type of family **(Circle one option)**	Guardian		Parent	

Student Survey

Please read the following statements. To the right hand side of each statement you will find five numbers, ranging from "1" (Not well at all) on the left to "5" (Very well) on the right. Please circle the number that best indicates your feelings about each statement.

Please circle the number that best answers the question

	Not well at all				**Very well**
1. How well can you finish your homework on time?	1	2	3	4	5
2. How well can you study when there are other interesting things to do?	1	2	3	4	5
3. How well can you concentrate on your school work?	1	2	3	4	5
4. How well can you remember information presented in class and in your school books?	1	2	3	4	5
5. How well can you arrange a place to study at home where you won't get distracted?	1	2	3	4	5
6. How well can you motivate yourself to do schoolwork?	1	2	3	4	5
7. How well can you participate in class discussions?	1	2	3	4	5

Please circle the number that best answers the question

	Not well at all				**Very well**
1. How well can you express your opinions when other classmates disagree with you?	1	2	3	4	5
2. How well can you become friends with other children?	1	2	3	4	5
3. How well can you have a chat with the person you have never met before?	1	2	3	4	5
4. How well can you work in a group with your classmates?	1	2	3	4	5
5. How well can you tell other children that they are doing something that you don't like?	1	2	3	4	5
6. How well can you tell a story to a group of children?	1	2	3	4	5
7. How well can you succeed in staying in friendship with other children?	1	2	3	4	5
8. How well can you succeed in preventing quarrels with other children?	1	2	3	4	5

Please circle the number that best answers the question

	Not well at all				**Very well**
1. How well can you succeed in cheering yourself up when something sad happens?	1	2	3	4	5
2. How well can you succeed in becoming calm again when you are very scared?	1	2	3	4	5

3. How well can you prevent becoming nervous?	1	2	3	4	5
4. How well can you control your feelings?	1	2	3	4	5
5. How well can you tell a friend that you don't feel well?	1	2	3	4	5
6. How well can you succeed in ignoring bad thoughts that come to your mind?	1	2	3	4	5
7. How well do you succeed in not worrying about things that might happen?	1	2	3	4	5

Your Expectations

How far in school do you think you will go? ***Please circle the number that best answers the question.***

1.	Complete secondary education.
2.	Complete a 2-year college certificate.
3.	Complete a diploma course
4.	Complete Bachelors Degree
5.	Complete Masters and/or PhD

Appendix B: Parent & Guardian Questionnaire

Instructions: This questionnaire contains questions and/or statements that you will be required to read carefully and respond to. By responding to the questions or statements, you are consenting to participate in this study. Please feel free to respond only to the questions that you are comfortable with. Where there are two or more options, please circle only one option.

Demographic Information

Age					
Gender	M		F		
Your country of Origin					
Your original language					
Your current occupation (the work you do for a living)					
Highest level of education	Less than primary	Completed primary	Completed Secondary	Completed College Certificate	Completed University Degree
Housing Status	Semi permanent		Permanent		
Number of children	1-2		3-5		More than 5
The number of years you have lived in Kenya	0-5 years	5-10 years	10-20 years		More than 20 years

Please circle the number that best answers the question

	Rarely	Sometimes	Often	Always
1. I participate in parent and family social activities such as music festivals with the teacher.	1	2	3	4
2. I talk with other parents about school meetings and school events.	1	2	3	4
3. I participate in planning school trips for my child.	1	2	3	4
4. I meet with other parents from my child's class outside of school.	1	2	3	4
5. I participate in fund raising (Harambee) activities for my child's school.	1	2	3	4
6. I feel that parents in my child's classroom support each other.	1	2	3	4
7. I participate in school functions such as parents' day, swimming gala day, prize giving day, and open house.	1	2	3	4
8. I hear teachers tell my child how much they love learning.	1	2	3	4
1. I spent time working with my child on mathematics homework.	1	2	3	4
2. I spent time working with my child on reading and writing homework.	1	2	3	4
3. I talk to my child how much I love learning new things.	1	2	3	4
4. I provide necessary learning materials at home for my child.	1	2	3	4
5. I share stories with my child about when I was in school.	1	2	3	4
6. I see to that my child has a place for books and school materials at home.	1	2	3	4
7. I maintain clear rules at my home that my child should obey.	1	2	3	4
8. I talk about my child's learning efforts in front of friends and relatives.	1	2	3	4
9. I review school work with my child.	1	2	3	4

10. I keep regular morning and bedtime schedule for my child.	1	2	3	4
11. I praise my child for school work in front of the teacher.	1	2	3	4
12. I spend time talking about study skills with my child.	1	2	3	4
13. I talk to my child about academic expectations.	1	2	3	4

Please circle the number that best answers the question	Rarely	Sometimes	Often	Always
1. I talk to the teacher about how my child gets along with his/her classmates at school.	1	2	3	4
2. I talk with my child's teacher about classroom rules.	1	2	3	4
3. I talk to my child's teacher about his/her difficulties at school.	1	2	3	4
4. I talk with my child's teacher about schoolwork to practice at home.	1	2	3	4
5. I talk to my child's teacher about my child's accomplishments.	1	2	3	4
6. I attend meetings with the teacher to talk about my child's learning or behavior.	1	2	3	4
7. The teacher and I write notes (in the diary) about my child or school activities.	1	2	3	4
8. I schedule meetings with administration to talk about problems or to gain information.	1	2	3	4
9. I talk with my child's teacher about personal or family matters.	1	2	3	4
10. I talk with my child's teacher regarding my expectations for my child.	1	2	3	4

How far in school do you think your child _____ will go? *Please circle the number that best* ***answers the question.***

1.	Complete secondary education.
2.	Complete a 2-year college certificate.
3.	Complete a diploma course
4.	Complete Bachelors Degree
5.	Complete Masters and/or PhD

Appendix C: Teacher Questionnaire

Instructions: This questionnaire contains questions and/or statements that you will be required to read carefully and respond to. By responding to the questions or statements, you are consenting to participate in this study. Please feel free to respond only to the questions that you are comfortable with. Where there are two or more options, please circle only one option.

Demographic Information

Age				
Gender	Male		Female	
Your country of Origin				
The section you teach	Primary		Secondary	
Your highest level of qualifications	Teacher Certificate	Diploma	Bachelors Degree	Masters and above
Teaching Experience	0-5 years	5-10 years	10-20 years	More than 20 years
School	Rural		Urban	
Socio-economic status of students in your class (average family income level compared to most people in the area).		Low	Average	High

Teacher Survey

Directions: This questionnaire is designed to help improve understanding of the things that influence teachers in their school activities. Your answers to this survey are confidential. Please indicate your opinion about each of the statements below.

Please circle the number that best answers the question: ***How much can you do?***	1 Nothing	2	3 Very little	4	5 Some	6	7 Quite a bit	8	9 A great deal
1. How much can you do to implement a variety of assessment strategies on refugee students?	1	2	3	4	5	6	7	8	9
2. How much can you do to provide an alternative explanation or example when refugee students are confused?	1	2	3	4	5	6	7	8	9
3. How much can you do to craft good questions for refugee students?	1	2	3	4	5	6	7	8	9
4. How much can you do to implement alternative strategies for refugee students in your classroom?	1	2	3	4	5	6	7	8	9
5. How much can you do to control refugee students' disruptive behavior in the classroom?	1	2	3	4	5	6	7	8	9
6. How much can you do to get refugee students to follow classroom rules?	1	2	3	4	5	6	7	8	9
7. How much can you do to calm a refugee student who is disruptive or noisy?	1	2	3	4	5	6	7	8	9
8. How much can you do to establish a classroom management system with refugee students in the class?	1	2	3	4	5	6	7	8	9
9. How much can you do to get refugee students to belief they can do well in schoolwork?	1	2	3	4	5	6	7	8	9
10. How much can you do to help refugee students value learning?	1	2	3	4	5	6	7	8	9
11. How much can you do to motivate refugee students who show low interest in schoolwork?	1	2	3	4	5	6	7	8	9
12. How much can you do to assist families in helping their children do well in school?	1	2	3	4	5	6	7	8	9

Teacher Expectations of Students

Directions: We are interested in knowing how you feel about the following statements. Read each statement carefully, and check the box that indicates how you feel about each statement.

Please fill this questionnaire with student _____ in mind.

Please circle the number that best answers the question

	Strongly Disagree				Strongly Agree
1. He/she is a capable student.	1	2	3	4	5
2. He/she will probably have a good school report at the end of this school year.	1	2	3	4	5
3. He/she can perform well in all school subjects.	1	2	3	4	5
4. He/she will probably get promoted to the next class.	1	2	3	4	5
5. He/she is an intelligent student.	1	2	3	4	5
6. He/she will probably have a high score on the final end of year exam.	1	2	3	4	5

How far in school do you think student _____ will go? ***Please circle the number that best answers the question.***

1.	Complete secondary education.
2.	Complete a 2-year college certificate.
3.	Complete a diploma course
4.	Complete Bachelors Degree
5.	Complete Masters and/or PhD