

EMPOWERING CHILDREN LIVING IN POVERTY IN THE HURUMA SLUM

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ABSTRACT

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Many children living in poverty around the world are unable to attend school and complete an education. When I Grow Up and the Furaha Community Centre have partnered together to provide children of the Huruma slum with an opportunity to attend school and hopefully escape the life of poverty. The purpose of this study was to determine what factors contribute to student success on the Kenya Certificate of Primary Education Examination, and if the program funded by When I Grow Up is addressing factors that will empower students to succeed in their education. Data were collected using a self-administered questionnaire and interviews with students and staff from the Furaha School. The findings indicated that a student's health, weight, BMI, age, and number of years they had attended school significantly correlated with higher KCPE scores. Recommendations include children entering school at a younger age, having them complete as many years of primary schooling as possible, and continuing to collect data at Furaha and from other schools in Kenya to increase the sample size.

Keywords: education, empower, Kenya, KCPE, poverty, slum, student, success

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Chapter 1

INTRODUCTION AND REVIEW OF LITERATURE

Background of Study

“Geography should not determine someone’s destiny” (Foster, 2011, 5:26). But for many people around the globe, it does. Millions of people are stuck in an endless cycle of poverty and do not have the resources to escape it. In 2008, the World Bank announced the new poverty line at \$1.25 per day (as cited in Shah, 2010). According to Shah (2010), 1.4 billion people are living below this poverty line, one billion of whom are children. Every day, 22,000 of these children die due to poverty-related causes. Few of them have access to adequate shelter, clean water, health services, or education (Shah). They often live in a sheetmetal or wood shack in a disease-stricken and hopeless slum.

Situations like this are not uncommon in Nairobi, Kenya. Throughout the colonial period, designated residential areas existed within Nairobi to serve the European and Asian peoples; Africans, on the other hand, were banned from them (Amnesty International, 2009). These African people therefore had to create settlements outside the city center, in areas not intended for habitation. Initially, the government ignored these areas and made no attempt to provide services for their residents. Between 1971 and 1995, the number of settlements grew from 50 to 130, and the population grew from 100,000 to 1 million. Recently, the Kenyan government has committed to improving the slums; however, they still fall short of meeting the needs of the communities. As of 2009, there were approximately two million people living in these informal settlements. Residents have little or no access to water, education, sanitation, or health care. They live

with the constant fear of violence, forced eviction from their homes, and the threat of water-borne diseases (Amnesty International, 2009).

Four Kenyan men who grew up in the slums realized they could make a difference in bettering the lives of the Kenyan people. After receiving an education in Kenya, they returned to the slums to provide children with the options they drastically needed. They created the Furaha Community Centre in the Huruma slum outside of Nairobi in order to provide food, medical assistance, safety, and education for the children of Huruma (Foster, 2011).

At the same time, a non-profit organization based out of Reedley, California, When I Grow Up, was founded. Leaders of the organization saw the need for basic human services in third world countries and wanted to provide Americans with an opportunity to help the most vulnerable in society: the children. They made it their mission to empower children in extreme poverty in order to break the cycle of poverty. Their hope was to raise up future leaders from poverty-stricken communities around the world who would return to their community and serve others in need. When I Grow Up partnered with the Kenyan leaders of the Furaha Community Centre to provide them with the resources they needed to best help the children in the Huruma slum.

The founders of the Community Centre knew that education was key to giving the children an equal chance with others around the globe. Free primary education was provided that now accommodates up to 550 children. When I Grow Up hopes that these children, through the program, obtain an education that gives them greater options for their future. The When I Grow Up leaders want to know if the resources and leadership they are providing the Furaha Community Centre are making a difference, and if the

program is meeting their goal of empowering children to complete an education in order to escape their life of poverty.

Review of Literature

Research for this review of literature was conducted at Robert E. Kennedy Library on the campus of California Polytechnic State University, San Luis Obispo. In addition to books and other resources, the following online databases were utilized: Academic Search Elite, Expanded Academic ASAP, and Sociological Abstracts. This review of literature is organized into the following topic areas: education in Kenya, factors that correlate with academic success, and empowerment.

Education in Kenya. Education is often a key topic when discussing the issue of alleviating poverty. According to Shah (2010), an estimated 121 million children worldwide do not attend school. In Kenya specifically, only 85% of children attend primary school, 24% attend secondary school, and 2% attend higher institutions (Kenya Education, n.d.). Jogwu (2010), in a study on adult illiteracy and its relationship to national development, stated that African countries remain underdeveloped because of the large population of illiterate people. Because of their illiteracy, their ability to contribute to national progress is limited. According to Jogwu, education is a way to overcome this and is a key instrument in development. This section will examine the educational system in Kenya, the variables that have been noted to affect academic performance, the non-governmental role in education, and suggestions researchers have made to improve education and development in Kenya.

Since 1985, Kenya has had an 8-4-4 school system: eight years of primary education, four years of secondary education, and four years of university (Kenya

Education, n.d.). At the end of grade eight, students must take the Kenya Certificate of Primary Education (KCPE) examination to continue on to secondary school. The exam presents five subjects: English, Kiswahili, mathematics, science and social studies, and religious education. Each subject is scored out of 100 marks, so the complete exam is 500 marks. To pass, a student must receive 250 marks. A student's success on the KCPE is a major factor in determining admission to secondary school (Ozier, 2010). There are three categories of secondary schools in Kenya: national, provincial, and district, with national schools being the most prestigious and district schools being the least. Although these different types of schools exist, the number of students who pass the exam exceeds the number of spaces available in the schools. Additionally, many students cannot afford to continue on to secondary school; even the least expensive district schools cost hundreds of dollars annually to attend. From secondary school to university, each Kenyan student must pass an additional exam, the Kenya Certificate of Secondary Education (KCSE). Once a student passes this exam, they are on a level playing field with every other child on the globe. They have the opportunity to become future doctors, teachers, and presidents (Foster, 2011).

In 2003, the Kenyan government made a promise to its citizens to provide free primary education for grades one through eight (Somerset, 2009). Uniforms were made voluntary so that all children could afford to attend public school. However, because of the stagnating economy, many places did not have enough public schools for all the children, especially in the crowded slums in Nairobi (Watson & Majtenyi, 2009). This led to the creation of many "informal" or "non-formal" schools. Informal schools are private schools supported by religious groups, communities, and other organizations to

provide education to the poorest children (Watson & Majtenyi, 2009). Informal schools still use the national curriculum taught in public schools, but they receive limited resources and frequently operate without trained teachers. The Ministry of Education rarely checks for quality; however, multiple studies have shown that these private, informal schools often outperform public schools on their KCPE examinations (Ejakai, Mutisya, Ezeh, Oketch, & Ngware, 2011; Tooley & Dixon, 2006; Watson & Majtenyi, 2009).

Ejakai et al. (2011) looked at the KCPE scores of students from two informal neighborhoods and two formal neighborhoods in an attempt to understand the factors that led to success on the KCPE exam. They found that students at the private (informal) schools performed much better than those at the public (formal) schools, even though the infrastructure was worse and they had fewer materials. They discovered that the large class size in public schools was a main factor. Because the Kenyan government focused on wider access to education and not on improving quality, the classrooms were often overcrowded and the schools had a shortage of teachers and learning materials.

Although there is some evidence that these informal schools are providing quality education to children who would not have had it otherwise, some argue whether or not private education should have a role in educational reform. Tooley and Dixon (2006) questioned if privatizing education should help developing countries meet the goal of universal primary education, or if this would limit the possibility of state reform. Government spokesmen also raised their concern over the issue, stating that they have never turned a child down and that they are in the process of building more schools (Watson & Majtenyi, 2009).

Regardless of whether schools should be private or public, researchers agree that education is fundamental to the development of third world countries (Arimah, 2004; Jogwu, 2010; Tooley & Dixon, 2006; Watson & Majtenyi, 2009). Jogwu (2010) stated that providing education for all Kenyans would “translate into better food, better health, more employment prospects, and a better quality of life for the people which is the essence of national development” (p. 498). According to Arimah (2004), a person completing primary school can increase expected income by 21-26%. Arimah also discovered that a country can reduce the number of people living below the poverty line by 3.89% if they increase their GDP allocated to education by 1%.

Although this is true for most of the world, it may not be so in Africa because so much of the money the government allocates to education goes towards wages (Arimah, 2004). Researchers have thus undertaken studies attempting to find other solutions to improving education in Kenya (Arimah, 2004; Bregman, 2004; Obanya, 2004; Ozier, 2010). A common theme among research findings has been the importance of increasing enrollment among the female population (Arimah, 2004; Ozier, 2010; Tooley & Dixon, 2006). Arimah (2004) found that increasing female education would reduce fertility levels, improve productivity of women, and contribute to national growth. Other studies have shown that while the Kenyan government may have stimulated interest in education, they do not have sufficient resources to provide what is necessary and thus outside help is needed (Bradshaw, 1993; Bregman, 2004; Tooley & Dixon, 2006). As the United Nations Development Programme (UNDP) stated, “real development in the third world countries cannot be achieved unless there is partnership between developed and

developing nations, and between the public and private sectors of the economy” (as cited in Jogwu, 2010, p. 497).

Factors that correlate with academic success. Throughout the world, children in schools fantasize about what they want to be when they grow up. Students hope to complete their education so that they may pursue their dream career. In many countries, students will continue on to University and obtain a job they have always wanted. However in many other countries, like Kenya, the majority of students are unable to finish their education because of multiple factors that hinder them from going to school or being successful in their learning. Researchers have examined these factors in order to correct obstructions of learning (Bold, Sandefur, Mwabu, & Kimenyl, 2009; McLaughlin & Drori, 200; Muola, 2010; Niles, 1981; Onsomu, Kosimbei, & Nqware, 2006). Researchers found that socio-demographic variables, health, and the school environment are all factors that affect student performance.

Socio-demographic variables are often examined when attempting to discover factors that contribute to academic success. One such variable is the student’s gender. According to Onsomu et al. (2006), many girls never go to school due to several factors that discourage them from attending: the cultural bias, early marriages, parental responsibilities, a heavy household workload, high poverty incidence, an unfavorable schooling environment, and poor socioeconomic and environmental conditions. Ejakai et al. (2011) found that among students who took the KCPE Exam, only 28.9% of girls passed compared with 50.7% of boys. However, although these scores have noted a substantial difference between males and females, the difference has been decreasing within the past few years.

A student's home environment also greatly impacts academic success. Students who live with a single parent have reported receiving lower grades in their classes (Muola, 2010). Often times, this is due to the parent having less time with the child because they must work longer hours to provide for their family. Multiple studies have shown that parental involvement and encouragement are crucial to the success of the child (Bold et al., 2009; Casanova, Garcia-Linares, de la Torre, & de la Villa Carpio, 2005; Muola, 2010). Students whose parents motivate them, help them with their homework, volunteer at their school, and attend meetings with the teachers achieve more in the classroom. Casanova et al. (2005) looked at the influence of family and socio-demographic variables on students and found that those students with normal achievement often had guardians who parented in a democratic way; very few of the students revealed having authoritarian or permissive guardians. Researchers suggest that creating awareness among parents regarding the importance of the student's home environment may help to increase involvement among the parents and improve classroom performance (Muola, 2010).

The level of education completed by the parents is also considered and according to Niles (1981), is the factor that has the greatest correlation with student success. Nabuka (1984) looked at the influence of home background variables on the achievement of Fijian and Indian students and confirmed this idea, stating that the education achieved by the father was one of the most important variables. Those students whose fathers had completed more education achieved a higher score on their Fijian Junior Certificate Examination.

The occupation of the parents has also been examined. Baker (1981) discovered that the occupational status of the mother greatly influenced the educational and occupational attainment of the child, having a greater impact than the father's status on the son's achievement and equal impact on the daughter's. Baker found that whether or not the mother works is less influential than the actual status of her occupation. The impact that occupation has on children is also affected by whether one or both parents are employed. Baker wrote that "as families move from a single- to a dual-employment pattern, the influence of the parent on children's attainments changes from predominantly like-sex to predominantly cross-sex in nature" (p. 254).

The socioeconomic status of the student's family was a frequent topic of discussion among many researchers studying variables that affect educational achievement (Ejakai et al., 2011; Niles, 1981; McLaughlin & Drori, 2000). McLaughlin and Drori found that students who came from poor families had a higher risk of academic failure. Ejakai et al. (2011), when looking at KCPE scores of students from informal and formal neighborhoods, found that students in informal neighborhoods scored on average 73.5 points less than those in formal neighborhoods, with the poorest households receiving the lowest marks.

Extracurricular activities have shown to lead to success in the classroom. Bold et al. (2009) discovered that Kenyan students involved in activities outside of class received higher marks on their KCPE exams than those who did not participate in extracurricular activities. Students who were involved in the community and were accountable to their community received higher scores as well (Bold et al., 2009).

A student's health is crucial to do well in school (Jensen, 2009). A child's nutritional needs must be met in order for them to focus in the classroom and remain in good health. Vaisman, Voet, Akivis, and Vakil (1996) revealed that student's who receive breakfast on the day of a test perform better than those who do not. If a child does not receive adequate nutrition, they often get sick, which leads to a greater number of absences from school. A child's health and nutritional needs must be met in order for them to achieve success in the classroom (Jensen).

The school environment is a final crucial factor that influences a student's performance. Muola (2010) and Niles (1981) found that the facilities can make or break a child's success. To be most effective, Kimalu, Nafula, Manda, Mqabu, Kimenyi (2001) wrote that teachers need adequate facilities, equipment, and materials. Teachers are also more effective in classes with a smaller number of students. According to Bold et al. (2009), the students with higher class sizes received lower marks on their KCPE exam. McLaughlin and Drori (2000) discovered a few reasons for this: instruction is more individualized and effective in smaller classes, greater curriculum is covered, and students are more actively involved in classroom activities. McLaughlin and Drori also found that although this trend is consistent across grade levels, a stronger relationship exists among secondary schools than elementary schools. Not only does classroom size affect student success, the size of the school affects it as well (McLaughlin & Drori, 2000). Larger schools often offer a greater diversity of programs and resources; however, McLaughlin and Drori discovered that student attendance is lower, dropout rates are higher, student satisfaction with school experiences is lower, and there is less participation in activities at large schools.

Empowerment. The term “empowerment” has gained popularity among many public and non-profit organizations in recent years. Higher education, government, inner-city public education, non-profit corporations, and foundations throughout the U.S. and abroad have adopted the idea of empowering individuals as a means of achieving their various missions (Fetterman, n.d.). People often explain empowerment as having the power to be in control of one’s own fate (Lord & Hustchison, 1993). Lord and Hustchison wrote that people understand their own needs better than anyone else; therefore, they should be able to act on them. Empower is defined as: “to give official authority or legal power to” or “to promote the self-actualization or influence of” (Ray, 2010, p. 1). If someone gives another person the authority to do something, that person is empowered to do what they were given the authority to do. However, to be self-actualized or to have influence over something is less clear. This section examines the levels, effects, process, and factors of empowerment. The section will close with a discussion of how empowerment relates to poverty, development, children, and education, and what organizations can do to help.

One way to begin to understand empowerment is to look at power and powerlessness. According to Lord and Hustchison (1993), power is “the capacity of some persons and organizations to produce intended, foreseen, and unforeseen effects on others” (p. 2). It often falls in the hands of those with great wealth or influence. Powerlessness, on the other hand, is when people feel that their actions cannot influence their future. Often it is a result of oppressive control and economic inequities by those who have power. However, powerlessness may also result from an internalized belief that change cannot occur. This leads people to an unwillingness to attempt to gain more

control and influence; they accept their situation because they don't feel that their actions can make a difference. There are many factors that contribute to this sense of powerlessness. However, Lord and Hustchison found that there is one characteristic that can change this belief which would ultimately improve the future of the individual: the feeling of empowerment.

Researchers who study empowerment often separate it into two levels: collective and individual (Barnes, Rodger, & Whyte, 1997; Lord & Hustchison, 1993; Page & Czuba, 1999; Turró & Krause, 2009). According to Barnes et al. (1997), collective empowerment focuses on encouraging community awareness and using resources to enhance community control. This level of empowerment attempts to develop connections between individuals and their community so that the individuals will want to be involved in the community and have an impact on it. Individual empowerment, on the other hand, focuses on the individual gaining control and influence in daily life and community participation (Barnes et al., 1997).

Researchers have tackled the issue of individual empowerment in an attempt to discover how to empower people most effectively. Lord and Hustchison (1993) and Turró and Krause (2009) have shown that empowering individuals produces many positive results. Empowered individuals gain a sense of personal control; they no longer accept their situation but act on their dreams and persistently search for better options (Lord & Hustchison, 1993; Rappaport, 1987). People begin to believe in their own capabilities and gain a sense of self-efficacy (Rogers, Chamberlin, Ellison, & Crean, 1997). They feel they are competent and have gained an understanding of the sociopolitical environment. Rogers et al. (1997) discovered that empowered individuals

recognize anger as an approach to instigate social change and contribute to the bettering of the community. Barnes et al. (1997) also added that individuals who become empowered develop leadership skills, such as organizing, leading groups, problem-solving, and decision making.

Lord and Hustchison (1993) found that empowerment is a process of change. They selected 41 men and women who experienced extensive powerlessness in their lives and, using qualitative data, determined the driving force that led each individual to want to be empowered. Lord and Hustchison discovered that many individuals go through four steps on their journey to feeling empowered. The first step is termed the entry stage. In this stage, some type of action occurs that motivates an individual to want to change. Lord and Hustchison found several motivations among the participants: a crisis had occurred, they were acting on anger or frustration, they responded to new information, or they were building on inherent strengths and capabilities. From this initial step, individuals moved to the advancement stage. In this stage, individuals developed a better understanding of social and political relations, connected with others and developed mentoring relationships, and expanded their choices and opportunities within collective organizations.

The third stage is incorporation. The focus of this stage is the development of a political consciousness. During this period, individuals often start joining groups and speaking out against injustice. Commitment is the final stage. Here, participants apply their new competence to other areas of their lives. They have increasing self-efficacy, influence, and are seen as a role model (Lord & Hustchison, 1993). This is the goal of all organizations trying to empower their people.

There are many factors that determine whether an individual will be empowered. Narayan (2002) wrote that there are four critical elements: access to information, inclusion and participation, accountability, and local organizational capacity. Lord and Hustchison (1993) expanded upon this to include the importance of support from people and of having access to valued resources.

A substantial amount of research has been completed on poverty and empowerment and the topic continues to gain popularity with many organizations; empowering people living in poverty is often a main goal for organizations trying to break the cycle of poverty. According to Turró and Krause (2009) poverty is defined as “a deprivation or insufficiency of basic and psychosocial needs” (p. 383). It not only depends on income but also on access to government services, such as education, healthcare, and housing. Turró and Krause discuss that poverty brings about a psychosocial reality, which leads to feelings of fatalism, passivity, impotence, a pessimistic view of the world, and a low level of ambition. These characteristics all contradict those which empowered individuals feel. Empowering people in poverty changes this, so that individuals feel their actions can make a difference. According to Narayan (2002), empowerment allows poor people to “participate in, negotiate with, influence control, and hold accountable institutions that affect their lives” (p. 11). This in turn bolsters their self-esteem and confidence and gives them the assurance they can overcome their problems and develop solutions on their own (Oladipo, 2009). This is crucial for people living in poverty because it contributes to the development of their community.

Economic and community development is a key motivation for empowering communities and individuals living in poverty. Turró and Krause (2009), in their study on the La Victoria Settlement in Chile, looked at the individual processes which empower people and how this is associated with their environment. The La Victoria Settlement was founded in 1957 through appropriation of land in Santiago, Chile. Three-thousand families migrated from a peripheral zone of Santiago, where they were living in miserable conditions. The settlers organized into different committees so that everybody was participating in the development of the region. Turró and Krause found that for a community to be empowered, it must offer the possibility to participate socially. Every individual in this community joined an organization. These organizations would work in areas such as health, security, or food preparation. Narayan (2002) found that another key to development is empowering women because it leads to better governance and lower levels of corruption in business and government.

Little research exists on the empowerment of children. Turró and Krause (2009), in their study on the La Victoria settlement, discovered that close family relationships are essential for children's empowerment. Other studies have explored the role of leisure and play in contributing to individual development and empowerment. Trenberth (2005) wrote that leisure contributes to health and well-being and has the potential to reduce stress, and that leisure has been found to "operate as a means to transcend negative life events" (p. 1). Although much of this information is not specific to children, leisure and play has been used as a tool to empower youth.

Education is fundamental to empowering individuals and communities. According to Obenchain, Abernathy, and Lock (2003), empowered students are essential

to the classroom and broader community. In their article, Obenchain et al. gave advice on how to do this: facilitate a sense of inclusion, influence, and openness. They encourage teachers to provide self-study activities, provide students with choices, participate in community service, use classroom jobs, build mentoring relationships, and encourage self assessment.

With the multitude of studies completed on empowerment, the main question for organizations is “how can we help?” Charles Ray (2010), the U.S. Ambassador to Zimbabwe answers this question quite well: “Empowerment is not achieved through giving people things. It is achieved through creating an environment where people can earn things for themselves” (para. 9). Giving people things does not change their view of themselves. It does not make them feel that their actions can change their future or that they have more power. Outsiders are not able to give people power. What they can do is work to eliminate barriers that oppress, control, and disempower vulnerable citizens (Lord & Hustchison, 1993). Because support is fundamental to individuals becoming empowered, organizations who want to help can listen to people who feel powerless, which will assist them in becoming aware of their oppression. Lord and Hustchison recommend encouraging and supporting citizens to contribute to and become a valued member of their community. Another suggestion is to center on people’s strengths and self-esteem rather than their deficits.

Summary. Empowerment has proven to be a successful strategy in developing communities and breaking the cycle of poverty in third world countries. People who have been empowered understand that their actions can make a difference, so they begin to get involved in their community and attempt to change the outcomes which affect their lives.

Many factors may contribute to empowerment but one factor that is fundamental is the availability of education. For people living in poverty-stricken areas, education is not readily available. Education in Kenya has made notable improvements in recent years and has provided more children with the option to attend school. Nevertheless, there continues to be a need for education throughout much of the country. Because the poorest of the poor are often the ones who do not have the option to attend school, the cycle of poverty continues. Many non-governmental organizations have seen the need to provide education for these children and have built schools in poverty-stricken areas. These schools have provided quality education equal to or greater than that of the public schools. However, little research has been done to determine if these schools are empowering children and providing them with what it takes to be successful enough to escape their life of poverty.

Purpose of the Study

The purpose of this study was to determine what factors contribute to student success on the Kenya Certificate of Primary Education Examination, and if the program funded by When I Grow Up is addressing factors that will empower students to succeed in their education.

Research Questions

This study attempted to answer the following research questions:

1. Is there a correlation between length of time studying at the Furaha School and the student's KCPE score?

2. Does a relationship exist between the socio-demographic variables affecting each student and success on the KCPE examination?
3. Does the student's health significantly affect their KCPE score?
4. Does a student's involvement in extracurricular activities contribute to higher scores on their KCPE examination?

Delimitations

This study was delimited to the following parameters:

1. Information was gathered from the Furaha Community Foundation leaders, staff, and 8th grade students living in the Huruma slum.
2. The factors that may contribute to the students' success were examined.
3. Conclusions were drawn from the Furaha Community Centre School in the Huruma slum in Nairobi, Kenya.
4. Data were collected in January of 2012.
5. Information for this study was gathered using a questionnaire and person-to-person interviews.

Limitations

This study was limited by the following factors:

1. The researcher not being a member of the population may have influenced the subjects' desire to participate or answer honestly.
2. Data on the student's background and personal history were not gathered by the researcher.

3. The amount of time the researcher could collect data in person was limited to only one week.

Assumptions

This study was based on the following assumptions:

1. It was assumed that the Furaha leaders and staff would respond honestly and to the best of their knowledge.
2. It was assumed that the KCPE scores display an accurate portrayal of the student's knowledge on subjects studied in the classroom.
3. It was assumed that the cultural difference between the population studied and the researcher would have a negligible effect on the interpretation of the data.

Definition of Terms

The following terms are defined as used in this study:

Children. People under the age of 18

Empowerment. The process of increasing the capacity of individuals or groups to make choices and to transform these choices into desired actions and outcomes (Wallerstein, 2006)

Kenya Certificate of Primary Education (KCPE). An examination taken at the end of grade eight that determines if a student is eligible to continue on to secondary school. A student must receive 250 marks out of 500 to pass. The exam consists of five subjects: English, Kiswahili, mathematics, science and social studies, and religious education

Poverty. Living on less than \$1.25 per day (as cited in Shah, 2010)

Slum. An informal settlement on the outskirts of a city where people live in unsafe and unsanitary conditions

Student. A person who is attending school and receiving an education

Chapter 2

METHODS AND PROCEDURES

The purpose of this study was to determine what factors contribute to student success on the Kenya Certificate of Primary Education Examination, and if the program funded by When I Grow Up is addressing factors that will empower students to succeed in their education. This chapter on methods and procedures is organized into the following sections: description of subjects, description of instrument, description of procedures, and method of data analysis.

Description of Subjects

The subjects consisted of 30 Kenyan children living in the Huruma slum that completed grade eight and took the KCPE examination in November of 2011. All of the children attended school at the Furaha Community Centre during the 2011 school year. About 60% of the children were orphans and all lived in extreme poverty. The sample included all of the students in the population. A questionnaire was completed for each student; however, only 16 of the 30 students were interviewed.

A second group of subjects included the administrators and staff of the Furaha Community Centre who completed the questionnaires regarding the students. The administrators were three male leaders who started and supervised the school. The staff consisted of 33 teachers, cooks, and social workers from the Huruma slum. The leaders and staff members who had access to the information and were available to complete the questionnaires during the time of data collection were selected to be part of the sample. In addition, a secondary analysis of interviews with eight staff members that had been

conducted by When I Grow Up were used: two teachers, one cook, two social workers, the executive director, the headmaster, and one of the leaders.

Description of Instrument

Two instruments were used in the collection of data, one for the student questionnaire, completed by Furaha staff members, and the other for the interviews with the students. The questionnaire consisted of questions regarding characteristics of the students, their home environment, health, and their history of schooling (Appendix A). Several staff members of the Furaha Community Center were then given the opportunity to complete the questionnaires regarding each 8th grade student to help determine which factors correlated with success on the KCPE examination. The staff members were asked to sign the informed consent form stating their voluntary participation (Appendix B).

The second instrument consisted of a list of eight questions to ask the eighth grade students regarding their goals and plans for the future, their relationship with their guardians, and the activities they are involved in outside of school (Appendix C). The questions were used as a guide for the interviewer and pertained to different factors that may contribute to their success in the classroom. Each student was asked to have a guardian sign the form, agreeing to let their child participate in the study (Appendix D).

All instruments, consent forms, and procedures were approved by the Human Subjects Committee at Cal Poly, San Luis Obispo prior to data collection. In addition, the questionnaire was pilot-tested with the leaders of When I Grow Up and the interview instrument was piloted with 8th grade students from Reedley, California between the dates of January 13 and January 16.

Description of Procedures

Prior to departing for Kenya in January 2012, the researcher met with the Executive Director of When I Grow Up on December 15, 2011 to create a schedule for data collection, based upon the times the staff would be available to complete the questionnaires and the students' availability for interviews. The questionnaire was scheduled to be administered on the morning of January 26 at the Furaha Community Centre School so the leaders could make sure all staff members were available who could participate in the study. Interviews were scheduled in advance to ensure that at least half of the students would be interviewed. Data collection took place between January 25 and January 30, 2012.

When administering the survey, the researcher provided the pencil and paper instruments and the informed consent forms. The researcher explained that participation was voluntary and that the results would be confidential. The staff members were instructed to answer honestly and that their help participating in the study would contribute to the bettering of their program. Interviews with students were conducted during the daytime at the Furaha Community Centre School. Each individual interviewed was given a brief description about the study. An instrument with questions was used by the interviewer, as well as a notebook to write comments. Informed consent was obtained from all interviewees.

In addition to the questionnaire and interview instruments, the researcher also obtained test score results, body mass indexes, and a list of guardians who received a microloan from Furaha. Interviews that had been conducted by When I Grow Up staff were utilized by the researcher as well. These tools were used along with the instruments

to discover additional factors that could lead to educational success, specifically factors related to the staff and school environment.

Method of Data Analysis

After the questionnaires were completed and interviews were conducted, the researcher reviewed the questionnaires, interviewee responses, and secondary data to attempt to answer the research questions regarding the factors that contributed to student success on the KCPE examination. Both instruments were utilized to triangulate information on different characteristics related to the students' lives. The data were organized according to the research questions. The researcher numbered each question and secondary data sheet according to the relevant research question. For the interviewee responses, the researcher created coding categories that were used to answer the research questions. The data were inserted into a Microsoft Excel spreadsheet.

The mean, range, frequency, and percentage were determined for many variables to help understand the subjects and to create an image of what their lives were like. The factors analyzed using a Pearson Product-Moment Correlation to determine correlations with KCPE scores included the number of years a student studied at Furaha, total years of education completed, perception of health, number of illnesses, number of meals per day, number in the household, safety of the home environment, height, weight, BMI, and age. Whether a guardian received a microloan, the interpretation of the students' BMIs, and the students' gender were analyzed using a T-test to determine if it had an effect on the students' KCPE score. Additionally, if a child received breakfast before school, their relation to their guardian, the guardians' education level, and the guardians' occupation were analyzed using an ANOVA to determine the effect on the students' KCPE score.

Chapter 3

PRESENTATION OF THE RESULTS

The purpose of this study was to determine the factors that contribute to student success on the Kenya Certificate of Primary Education Examination, and if the program funded by When I Grow Up is addressing factors that will empower students to succeed in their education. Data were gathered from the Huruma Slum in Kenya during January of 2012. The researcher contacted the executive director of When I Grow Up for permission to interview students and staff from the Furaha Community School. The researcher interviewed 16 of the 30 graduated 8th grade students and multiple staff members helped complete a questionnaire for each student in the population. In addition, the researcher utilized documents from the Furaha Community Foundation and interviews conducted by When I Grow Up.

Characteristics of the Students

Several characteristics of the students were examined, including gender, age, health, height, weight, Body Mass Index (BMI), educational and professional goals, and participation in extracurricular activities. Of the 30 students in the population, females ($n = 21, 70\%$) outnumbered males ($n = 9, 30\%$). The mean age was 15.8, with the ages ranging from 13-17. Table 1 shows the frequency and percentage of the ages of the 2011 class 8 students.

Table 1
Age According to Frequency and Percentage

Age	<i>f</i>	%
13	2	6.67
14	4	13.33
15	4	13.33
16	8	26.67
17	12	40.00

The weight and height of the students were measured and used to determine each student's BMI. After calculating the students' BMIs, those with a normal weight ($n=25$, 83.33%) were found to outnumber the students below the normal weight category ($n=3$, 10%). None of the students were overweight; however, two of the students' BMIs were not available due to their being no record of their heights.

The health of the students was identified by the Furaha staff and the number of health problems each student dealt with in the past year was recorded on the questionnaires. A question was asked regarding the perceptions of each student's health using a Likert scale from 1-5, with 1 being very poor and 5 being excellent. The range included only ratings of 2 and 3, with the mean score being 2.9. The number of health issues ranged from 0-3, with the mean score of 0.4 illnesses. The types of illnesses noted included problems with eye sight, ears, stomach, and chest problems.

The students were asked about their educational and professional goals. The careers the students mentioned they hope to hold in the future include a journalist, businessman, lawyer, doctor, surgeon, banker, accountant, engineer, teacher, pilot, and air hostess. The occupation that was listed the most was a doctor ($n=9$, 30%). Regarding

the students' educational goals, all of the students plan to graduate from secondary school. The students who desire to go to university ($n=21$, 70%), outnumber those who want to go to college ($n=8$, 27%). One student did not state a preference between college and university. The difference between college and university in Kenya is that a college degree is usually a 2-3 year program versus university being 4 years or longer. Teaching is often a popular degree at a college; universities often emphasize technology and science-oriented degrees. Universities are also considered to be more prestigious.

The students' involvement in extracurricular activities was also asked on both the questionnaire and in the interviews; however, only 10 of the 30 questionnaires had responses, all of which listed football as the extracurricular activity. During the interviews, some students responded that they enjoyed singing, dancing, watching movies, cleaning the environment, and playing sports such as football, cricket, rugby, and running. Physical education is a required component of primary schools in Kenya so all students participate in recreational activities during school.

Educational History

Multiple items on the questionnaire referred to the educational history of the students. The Furaha Community School (FCS) had been in operation for 5 years, so while some students had attended FCS for all 5 years, others had only attended their last year for class 8. The mean number of years the students attended FCS was 2.8 years. Prior to this, students attended other schools and for different lengths of time. The type of school each student attended was examined and the results are shown in Table 2. The majority of the students (70%) attended public school. The length of time the students

attended school in total was also examined and is displayed in Table 3. Twenty-two of the 30 students completed 11 years of schooling.

Table 2
Type of Schools Attended Prior to Furaha by Frequency and Percentage

School Type	<i>f</i>	%
Public	21	70.0
Private	6	20.0
Community	2	6.7
Public & Private	1	3.3

Table 3
Years of Schooling Completed by Frequency and Percentage

Length of Time (years)	<i>f</i>	%
9	1	3.33
10	2	6.67
11	22	73.33
12	5	16.67

Home Environment

Multiple factors related to the students' home environment were examined, including the number of people in the household, the safety of the home, and information related to the students' guardians. Household numbers ranged from 3-8 people, with the average number in a home being 5.57 people. The safety of the students' living situation was rated on a Likert scale from 1-5 with 1 being dangerous to 5 being very safe. The mean score was 3.13, with the standard deviation being 1.106.

Information about the guardians was noted on each student’s questionnaire. The researcher asked who was responsible for the student’s care and the majority (60%) response was one or both parents. See Table 4 for all responses. The level of education their guardians completed was recorded and it was discovered that only 1 of the 30 students’ guardians went to college or university. For a more complete picture, see Table 5 below.

Table 4
Guardian in Home by Frequency and Percentage

Guardian Type	<i>f</i>	%
One Parent	6	20.00
Both Parents	12	40.00
Family Guardian	9	30.00
Other Guardian	1	3.33
Safe House Attendant	2	6.67

Table 5
Guardian’s Education by Frequency and Percentage

Education Level	<i>f</i>	%
No Education	2	6.67
Some Primary	1	3.33
Primary	10	33.33
Secondary	8	26.67
College/University	1	3.33
Total	22	73.33

Note: The [staff] respondents only knew and recorded the education of the guardians for 22 of the 30 subjects.

The occupations of the guardians were also noted by the respondents. The different jobs included factory workers, cooks, vendors, tailors, a safe house attendant, teachers, a watch man, a small business owner, and casual workers. Forty percent of the students' guardians participated in casual work. The second most popular occupation was a vendor ($n=5$, 17%). The Furaha Community Foundation distributes microloans to some of the students' guardians to help them start a business. From the class 8 students, only two (7%) of the students had guardians who received a microloan.

The number of meals a student receives as well as if they eat breakfast prior to going to school was inquired about on the questionnaire. The number of meals ranged from 1 to 3 per day. Every student received one meal at school. For one of the students, this was the only meal she received each day. Only nine (30%) of the students consistently receive breakfast at home prior to going to school. For a complete presentation of the number of meals each child receives, see Table 6 below.

Table 6
Number of Meals per Day by Frequency and Percentage

Number of Meals	<i>f</i>	%
1	1	3.33
1-2	2	6.67
2	21	70.00
3	6	20.00

Additional variables were examined related to a student's home environment. During the interviews, students were asked about their guardian's encouragement and involvement in their life, the expectation their guardian's have for them related to their

education, what their relationship is like with their guardian, and what tasks they are required to complete at home. Most of the students responded in the same way: their guardians were very supportive of them and understood the importance of completing an education, the guardians expect them to continue on to college or university, and they have a good relationship with their guardians. Of the 16 students interviewed, only 1 replied that she did not have to complete any tasks at home. The others responded that they helped with domestic work, such as cleaning the house, cooking, washing utensils, and taking care of siblings.

Furaha Community School

Interviews conducted by When I Grow Up were utilized to examine if the school environment significantly affects student success. One variable studied was the background and qualifications of the staff. To teach at a Kenyan public primary school, teachers must have attended college and received a certificate to teach. All four of the teachers that had been interviewed were qualified and according to the headmaster, all of the teachers at Furaha were as qualified as teachers from other Kenyan schools.

Many of the interviewees were asked questions regarding the differences between Furaha and other primary schools. The number one response was the feeding program that Furaha offered. At other schools and before Furaha offered this, students would go home for lunch but after finding nothing to eat, would remain at home and not return to class. Three of the respondents mentioned that the health and concentration of the students in class were worse because many days, they would not receive food. Since the start of the feeding program, the staff has noticed a considerable difference in the health and concentration of the students.

Another factor that four of the respondents mentioned was the dedication of the staff at Furaha. One interviewee said that the teachers work extra hours, coming in on weekends and staying after class, because of their passion for what they do. Two other staff members mentioned that this is very different than their experiences working previously at public schools. Another differing factor is the type of students at Furaha. The students at Furaha are the poorest of the poor; they cannot afford even public school. One interviewee spoke that these children, coming from difficult backgrounds, are motivated because they want to improve their situation, which helps lead to their success in their education. Other differences mentioned include the larger school and class size, and the better facilities at government schools.

Kenya Certificate of Primary Education Examination

The scores for the 2011 KCPE exam were recorded. The KCPE exam is a measure of a students' knowledge of their coursework and their success in the classroom. The mean score for the class 8 Furaha students was 268.37, with the minimum score 142 and the maximum score 381. The scores were categorized into groups of 50 marks, which are displayed in Table 7.

A Pearson Product-Moment Correlation test was conducted between KCPE scores and many of the variables previously discussed to determine if any significant correlations exist. Results are shown in Table 8. The mean and range of each variable are given as well. Significant relationships were present for the total number of years of education a student completed, the staff's perception of the student's health, the number of health issues the student has dealt with over the past year, the weight and BMI of the student, and their age.

Table 7
KCPE Scores by Frequency and Percent

KCPE Scores	<i>f</i>	%
350-500	1	3.33
300-349	5	16.67
250-299	15	50.00
200-249	5	16.67
150-199	3	10.00
0-149	1	3.33
Total	30	100.00

Note: 21 (70%) of the subjects scored above a 250, which is 21.62% higher than the national average of 48.38%.

Table 8
Correlations Between KCPE Scores and Variables in Students' Lives

	KCPE Correlation	Significance	Mean	Range
Years at Furaha School	-.224	.234	2.80	1-5
Total Years of Education	.466**	.009	11.03	9-12
Perception of Health	-.453*	.012	2.90	2-3
Number of Illnesses	.470**	.009	.40	0-3
Number of Meals per Day	-.155	.414	2.13	1-3
Number in Household	.047	.803	5.57	3-8
Safety of Home Environment	-.205	.278	3.13	2-5
Weight (kg)	-.546**	.002	49.70	40-63
Height (cm)	-.271	.163	162.82	147-173
BMI	-.432*	.022	18.85	16.2-22.7
Age	-.539**	.002	15.80	13-17

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

T-tests and ANOVAS were conducted to determine the influence of other variables on the KCPE scores. None of the variables tested had an effect on KCPE scores. However, due to the small cell sizes, it is difficult to determine statistical significance. The mean KCPE scores were determined for each variable. For those students considered underweight according to their BMI (n=3), the mean KCPE score was 276; the mean score for students considered a normal weight (n=25) was 266. The students whose guardians received a microloan (n=2) scored on average 260 marks on their KCPE exam while the students whose guardians did not receive a microloan (n=28) scored 269. The average score for both males (n=9) and females (n=21) was 268 marks.

An ANOVA was conducted on three additional variables to determine whether or not KCPE scores were influenced by the type of guardian a student had, what level of education their guardian completed, and what occupation the guardian held. Because there were so many possible responses, statistical significance could not be determined. The average KCPE scores for the responses for all three variables are shown in tables 9, 10, and 11 below.

Table 9
Average KCPE Scores and Number of Responses by Guardian Type

Variable	Mean KCPE Score	# of Responses
One Parent	276	6
Both Parents	271	12
Family Guardian	269	10
Safe House Attendant	226	2

Table 10
Average KCPE Scores and Number of Responses by Guardian Education

Variable	Mean KCPE Score	# of Responses
No Education	273	2
Some Primary	320	1
Primary	262	10
Secondary	271	8
University	381	1
Unsure	261	6

Table 11
Average KCPE Scores and Number of Responses by Guardian Occupation

Variable	Mean KCPE Score	# of Responses
Factory Worker	381	1
Cook	342	1
Vender	272	5
Casual Work	275	12
Tailor	272	3
Safe House Attendant	226	2
Teacher	242	4
Watch Man	192	1
Small Business	236	1

The mean KCPE score for those students who lived with a Safe House Attendant was significantly lower than students who lived with their parents or family guardians; however, the mean score was based on only two responses, with one being a major outlier. The greatest number of students had guardians who completed primary school

(n=10). The highest mean KCPE score regarding this variable was from students whose guardians went to university, although the score was based on only one student. The most frequent response for the guardians' occupation was casual work (n=12). Nine different occupations were listed for this question.

Summary

The data on the 30 recently graduated class 8 students from Furaha Primary School indicated that the majority of students were female, ages 16 and 17. All of them desired to graduate from secondary school and continue on to college or university. Over 2/3 of the students received a score greater than 250 marks on their KCPE exam. Those factors in the students' lives that had a significant correlation with this success included the total number of years the student attended school, the number of illnesses they had in the past year, their overall health, and their age, weight, and BMI. A detailed summary and a discussion of the findings will follow in Chapter 4.

Chapter 4

DISCUSSION AND CONCLUSIONS

For the Furaha Community Foundation (FCF) to be effective in providing a program that meets the needs of children, allowing them to complete an education and escape the life of poverty, the leaders need to be aware of the factors that lead to educational success. In addition, it is beneficial for When I Grow Up, the financial supporter of the FCF, to have a better understanding of what their resources have done and how to make better use of them. By researching multiple factors that affect the students' lives, resources can best be allocated to bring about the most positive results. This concluding chapter will include the following: a summary of the study, a discussion of the findings including limitations, conclusions based on the research questions, implications for When I Grow Up and the Furaha Community Foundation, and recommendations for future research.

Summary

Education in Kenya has made notable improvements in recent years, with the addition of the Free Primary Education for All Initiative passed in 2003. However, while the initiative attempts to provide education for all children, hidden fees are imposed upon the families and many cannot afford to send their children to school. In addition, the public schools that exist are often overcrowded and can have over 100 students for one teacher. This large class size is one factor that can be detrimental to educational success. Many factors that have proven to lead to educational success include involvement in extracurricular activities, being healthy and receiving adequate nutrition, having educated

parents who are encouraging and involved, and as mentioned previously, a smaller class size. Students who are empowered prove to be more successful in their education as well. They understand that their actions make a difference so they begin to try to control the outcome of their lives.

During January of 2012, data were collected from 30 students and 8 staff members from the Furaha Community Centre School in Kenya. Interviews were conducted with students and questionnaires were completed by the staff for each recently graduated class 8 student. Results were tabulated and evaluated using frequencies, percentages, and means; T-tests, ANOVAs, and Pearson Product-Moment Correlation tests were conducted to determine relationships and differences that exist among the variables.

The results showed that the majority of the subjects were female, ages 16 or 17, and of normal weight. All of the students desired to complete secondary school and go on to college or university. The majority of the students passed the KCPE exam according to Kenyan standards, scoring above 250 marks. The factors in the students' lives that had a significant correlation with success on the KCPE exam included number of years of school completed, health, weight, BMI, and age.

Discussion

Many factors in the Huruma students' lives appear to affect their success in their education. While results show that there is no correlation between the length of time studying at Furaha and their KCPE score, the overall average KCPE score from the Furaha School is significantly higher than the average Kenyan School score. In the interviews, many of the staff spoke of the uniqueness of Furaha and how the teachers are

much more dedicated and passionate than at other schools. This factor may contribute to the higher scores at Furaha. Another reason might be the smaller class and school size. The Furaha staff states that teachers at public schools often have as many as 200 students per class, while Furaha's class sizes remain between 25 and 78 students. Previous research supports these statements, showing that a smaller class size significantly affects educational success. Researchers also found that the type of school, private versus public, correlates with higher scores, and that on average, private schools perform better than public schools. This is confirmed by the Furaha test results.

Because of the short amount of time of data collection, the knowledge of the school and staff at Furaha, as well as other Kenyan schools is limited. Further research should be done on other Kenyan schools to compare their scores and factors that affect their students to the Furaha School and students. In addition, data should be collected after the school has been in operation long enough to have had students complete each level at FCS; this may help determine if the length of time at Furaha affects a student's test score.

The total number of years a student completes education has a significant positive correlation with KCPE scores. Students who had completed more years of education (11-12 years) score higher marks than those who complete fewer (9-10 years). This seems to affirm what most people would think, that having more instruction would make a student more knowledgeable and successful.

Aside from school factors, multiple socio-demographic variables have been recorded for the students and tested to see if any relationship exists between them and KCPE scores. The only variable that has a significant relationship with KCPE scores is

age. As the age of the student increases, the KCPE score decreases. Little research has been done to affirm this result. It would be interesting to determine why this is one of the variables that most affects a student in their education.

Another interesting detail to note is the proportion of males to females in the FCS class versus the national average. Forty-eight percent of all students who took the 2011 KCPE exam in Kenya are females. At Furaha, 70% of the students are female. Increasing female enrollment is important in underdeveloped countries because it contributes to national growth, reduces fertility levels, and improves productivity in women (Arimah, 2004). In the long run, this may be very beneficial for Furaha and for the community of Huruma. Because of the small population size, no assumption can be made regarding the relationship between gender and KCPE score. However, looking at the pass rate, 77.78% of the males passed, while only 66.67% of the females passed. These numbers are still far better than the averages given by former researchers, stating that on average 50.7% of boys pass and only 28.9% of females (Ejakai et al, 2011).

Because of the limited population size, few assumptions can be made regarding how a student's home life affects their education. Many of the questions had multiple possible responses so most of the cell sizes had less than 10 subjects to draw conclusions from. Data collected from Furaha shows that the household size and safety of the home has no relationship to KCPE scores. It would be interesting to look more specifically at the household to see if the home environment has any influence, such as if there is electricity in the home or enough space and time to study.

Further data should be collected related to the guardians, their level of education completed, their occupation, and their relation to the child. Previous research notes that

students living with a single parent are often less successful. Results from this study do not show any sort of relation; however, the categories “Family Guardian” and “Other Guardian” on the questionnaire do not indicate how many guardians are in the home. For future data collection, a related question could be asked to provide more insight into student success. Another idea for future research might be to continue collecting data from the children living in Safe Houses to see if their behavior and school results change as an outcome of the new home environment.

Other previous research relating to the guardian notes that the occupational and educational status of the parents has a significant correlation with student success. Unfortunately, no such assumption can be made from the findings for this study. From the 30 students, there are nine different occupations of guardians mentioned. As more data is collected in the future, stronger relationships may emerge. Although there is no significant relationship among guardian education and student success, the mean scores increase from students whose guardians completed a primary (262.10), secondary (270.88), and higher education (381.00). The staff that completed the questionnaires does not have information available about 8 of the student’s guardians so conclusions are only able to be drawn from 22 subjects.

Related to guardian occupation is the microloan program funded by the Furaha Community Foundation and When I Grow Up. Two of the 30 students’ guardians received a microloan. Because of this small number, a significant relationship cannot be determined. However, in the future it would be interesting to look at how microloans affect a child’s home environment over time, as well as their success in the classroom.

During the student interviews, most of the students spoke of their guardians as being very supportive and encouraging and understood the importance of school to improve their living situation. While data has not been collected from students at other schools, this factor may be one that led to the success of most of the students from Furaha. Multiple studies mentioned have discovered that parental involvement and encouragement are crucial to the success of the child. They also mention parent involvement as contributing to success as well. This could be something that Furaha could promote for those students whose guardians have time where they could volunteer with the school. For most of the guardians, however, this is not an option.

One interesting factor to note from prior research is that in the study completed by Ejakai et al. (2011), students in informal neighborhoods perform much worse than students in formal neighborhoods, with the poorest households receiving the lowest marks. While the socioeconomic status of the students' families was not measured, all of the students come from informal neighborhoods, yet 21 of them passed, performing better than at least 51.62% of Kenyan class 8 students. It would be interesting to note the overall percentages of those who passed from informal versus formal neighborhoods. Interviews with students and staff brought forth many comments regarding how the unfortunate living situation of the Huruma children is what motivates them to succeed so that they are able to improve their lives. Further research could be done to determine if the informal neighborhoods are a detriment to students in their education or serve as a motivator to succeed.

Many variables concerning the students' health are related to their KCPE scores, although most of the results counter common beliefs and previous research. After asking

staff members their perception of each student's health, those students with lower scores (indicating less healthy), on average, score higher on the KCPE exam than the students with higher scores (indicating healthier). In addition, the students who have a greater number of health issues or illnesses score higher on the exam. After evaluating the scores a bit more, the researcher discovered that the student who received the highest marks has multiple health issues and is an outlier among the subjects, thus skewing the data significantly because of the small sample size. After removing this student's data and re-running the tests, the relationship is no longer significant.

Related to health is a person's nutrition. Researchers have found that a child's nutritional needs must be met in order for them to focus on their schoolwork and to remain healthy (Jensen, 2009). However, the findings from the Furaha students shows no relationship between the number of meals a student receives and their KCPE scores. Previous research also notes the importance of breakfast; results from this study do not show it to have any significance. Because of the small cell sizes and lack of responses related to breakfast, additional research should be conducted to determine if a meal before school significantly improves success in the classroom.

Regarding the students' height and weight, as a student's weight increases, their KCPE score decreases. This may reflect back to the age variable, where the younger students, who are more likely to weigh less, are more successful than the older students. However, after measuring the students' BMIs, which takes into account their age, those with lower BMIs still score higher on the exam. Because only three students are considered underweight, the test results cannot be deemed conclusive. The height of the students appears to have no correlation to KCPE scores.

An insufficient amount of data has been collected relating to the students and their extracurricular activities. While many of them enjoy football, they don't always have the time to play. School in Kenya is Monday through Saturday, from 6:45am until 6:15pm. After 6:15pm, it is often dark, and most of the homes and places in Huruma do not have electricity. Therefore, there are few opportunities for activities outside of school and housework. However, students are able to participate in recreational activities during school, and many times they will play games that require physical activity during their breaks. Prior research shows that being involved in the community or in extracurricular activities leads to success in the classroom (Bold et al., 2009). Additional research could be conducted relating to the Huruma students' lives and hobbies outside of school and how it impacts their success in the classroom.

Interviews with the students and staff brought forth information related to empowerment. The teachers at Furaha understand the importance of empowering the children. Students are given classroom jobs and self-study activities. They are given a voice and encouraged to be confident. The students all seem assured that they are able to overcome their problems and make a difference in their world. They believe they can have the power to change, and that this comes through education. This empowerment, according to previous research, is what makes for success, in the classroom and in the world beyond.

The Furaha Community Foundation has addressed most of the factors that significantly contribute to student success. Regarding the students' health, including their weight and BMI, Furaha has added a feeding program for the children so that they know each child is receiving at least one meal every day. This not only improves the child's

weight and BMI so that they are not malnourished and underweight, it also improves their health overall. Since the feeding program has begun, teachers have noticed a better attendance record among students and better concentration in the classroom. Furaha also provides an HIV/AIDS clinic, which gives anti-viral medication to the children suffering from HIV or AIDS. Lastly, Furaha provides de-worming and de-licing for the children.

Concerning the total number of years of education completed, Furaha brings in children who cannot afford education every year for each grade level. The researcher has not determined how the Furaha staff decides which grade the child will be in, but this might be a question to bring forth in the future, in order that the children receive as many years of education as possible. However, this may contradict the age factor, which shows that the younger class 8 students are more successful than the older students. More research should be done to determine if one factor is more significant than the other.

As mentioned multiple times throughout the discussion, a major limitation in this study is the limited number of subjects. Conclusions are not able to be drawn regarding many of the variables because of the numerous responses with few subjects. However, although this is a limitation for this study, it is a helpful starting point for When I Grow Up and the Furaha Community Foundation if they choose to continue collecting data in the future.

Although many of the results seem to contradict popular beliefs, there may be a valid reason. According to the headmaster, the poorest children from the worst backgrounds are motivated because they want to improve their situation. Their health may suffer and their home life may be close to unbearable, but because of their desire for a brighter future, they will give it their all to be successful in their education.

As nonprofit organizations seek to raise support through fundraisers or from donors, it is critical that the results are measured. As When I Grow Up continues to operate, they must continue collecting data and use these results as a benchmark or starting point. The information can be used to spread awareness and raise additional funds. They can use the results to paint a picture or tell a story about the first class to graduate primary school from Furaha. Other organizations may also use the results as a way to help those living in poverty.

Conclusions

Based on the findings of this study, the following conclusions are drawn:

1. There is no correlation between length of time studying at the Furaha School and the student's KCPE score.
2. A negative correlation exists between a student's age and their KCPE score.
3. The student's health significantly affects their KCPE score.
4. There was not enough data collected to determine if a student's involvement in extracurricular activities contributes to a higher score on the KCPE exam.

Recommendations

Based on the conclusions of this study, the following recommendations are made:

1. Bring children into school when they are young so that they can start school at a younger age.
2. Have the student's complete every year of primary schooling so they have as many years of education as possible before taking the KCPE exam.

3. Continue collecting data at Furaha and from other schools to increase the sample size.
4. Research the staff and school environment at other Kenyan schools to compare results and to determine if it significantly affects a student's KCPE score.
5. Determine the probability of students graduating from secondary school, going to college/university, obtaining a job, and improving their living situations.

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APPENDIXES

Appendix A

Student Questionnaire

8th Grade Student Questionnaire

1. Student's code #: _____
2. Number of years this student has attended Furaha Community School? _____
3. How many years of schooling this student completed prior to attending Furaha? _____
4. Which type of school did this student attend prior to Furaha (circle one)?
Public Private Neither
5. In the past year, approximately how many illnesses did this student contract? _____
6. On a scale of 1-5 with 1 being poor and 5 being excellent, how would you rate this student's health (circle one)?
Poor Mediocre Excellent
1 2 3 4 5
7. On average, how many days a week does this student eat breakfast before coming to school? _____
8. On average, how many meals a day does this student receive? _____
9. How many people live in this student's household? _____
10. Who is responsible for this student's care?
 - a. 1 parent
 - b. Both parents
 - c. Family guardian
 - d. Other guardian
 - e. Social Worker-Safehouse
 - f. Other: _____
11. What is the highest level of education completed by one or both of this student's guardians?
 - a. No education
 - b. Some primary
 - c. Primary (Completed grade 8)
 - d. Secondary (Completed grade 12)
 - e. University

12. What is this student's guardian(s)'s occupation?

13. On a scale of 1-5 with 1 being dangerous and 5 being very safe, how safe is the location of this student's home (circle one)?

Dangerous			Neutral		Very Safe
1	2	3	4	5	

14. In what ways is this child involved in the community?

15. Gender

- a. Male
- b. Female

16. Age _____

Appendix B

Staff Informed Consent Letter

Appendix C

Interview Questions

Student Interview

1. What is your favorite part about school?
2. What do you want to be when you grow up?
3. What is the highest level of education you want to complete?
4. How close are you to your guardian(s)?
5. Does your guardian(s) help you with your schoolwork?
6. Does your guardian expect you to continue on to complete secondary school?
7. What tasks are you required to complete at home?
8. What activities do you participate in outside of school?

Appendix D

Student Informed Consent Letter

INFORMED CONSENT TO PARTICIPATE IN A STUDY OF CHILDREN ATTENDING THE FURAHA COMMUNITY CENTER

Senior project research on children attending the Furaha Community Center is being conducted by Amy Lepp in the Department of Recreation, Parks, and Tourism Administration at Cal Poly State University, San Luis Obispo, California, in the United States of America, under the direct supervision of Dr. Bill Hendricks. The purpose of this study is to determine what factors contribute to student success on the Kenya Certificate of Primary Education Examination, and if the program funded by When I Grow Up is addressing factors that will empower students to succeed in their education.

Your child/children is/are being asked to take part in this study by answering a few questions regarding different aspects of their life. With your permission, we will record their responses. Please be aware that they are not required to participate in this research and you or they may discontinue their participation at any time without penalty. They may also choose not to answer questions that they prefer not to answer.

Your child's/children's confidentiality will be protected. Their name will not be recorded in the presentation of the results. Potential benefits associated with the study include a better understanding of what the Furaha Community Centre can do to better your child's educational experience and a greater awareness outside of Huruma about what the Furaha Community Centre is doing which will hopefully increase support for the foundation.

If you or your child/children have questions regarding this study or would like to be informed of the results when the study is completed, please feel free to contact Amy Lepp at 001-559-284-0013. If you or your child/children have questions or concerns regarding the manner in which the study is conducted, you may contact Dr. Steve Davis, Chair of the Cal Poly Human Subjects Committee, at 001-805-756-2754, sdavis@calpoly.edu, or Dr. Susan Opava, Dean of Research and Graduate Programs, at 001-805-756-1508, sopava@calpoly.edu.

If you agree to allow your child/children to voluntarily participate in this research project as described, please indicate your agreement by signing below. Please keep one copy of this form for your reference, and thank you for your participation in this research.

Name of Child/Children Involved in this Research: _____

Signature of Parent/Legal Guardian

Date

Signature of Researcher

Date