

# *African Journal of Reproductive Health*

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AJRH Editorial Office:

editor@ajrh.info

africanjournalofreproductiveH@gmail.com

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*Igue-Iheya, Benin City, Edo State, Nigeria*

*Email: wharc@hyperia.com*

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# African Journal of Reproductive Health

Editor: Friday Okonofua

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## ABOUT AJRH

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*African Journal of Reproductive Health (AJRH)* is published by the Women's Health and Action Research Centre (WHARC). It is a multidisciplinary and international journal that publishes original research, comprehensive review articles, short reports and commentaries on reproductive health in Africa. The journal strives to provide a forum for African authors, as well as others working in Africa, to share findings on all aspects of reproductive health, and to disseminate innovative, relevant and useful information on reproductive health throughout the continent.

*AJRH* is indexed and included in Index Medicus/MEDLINE. The abstracts and tables of contents are published online by INASP at <http://www.ajol.info/ajol/> while full text is published at <http://www.ajrh.info> and by Bioline International at <http://www.bioline.org.br/>. It is also abstracted in *Ulrich's Periodical, Feminist Periodicals African Books Publishing Records*.

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### **Women's Health and Action Research Centre**

*Km 11, Benin-Lagos Express Way*

*Igue-Iheyia*

*P.O. Box 10231, Ugbowo*

*Benin City, Edo State, Nigeria*

*Email: [wharc@hyperia.com](mailto:wharc@hyperia.com) or [africanjournalofreproductiveH@gmail.com](mailto:africanjournalofreproductiveH@gmail.com)*

*WHARC website: <http://www.wharc-online.org>*

*AJRH website: <http://www.ajrh.info>*

The Women's Health and Action Research Centre (WHARC) is a registered non-profit organization, committed to the promotion of women's reproductive health in sub-Saharan Africa. Founded in 1995, the centre's primary mission is to conduct multidisciplinary and collaborative research, advocacy and training on issues relating to the reproductive health of women. The centre pursues its work principally through multidisciplinary groups of national and international medical and social science researchers and advocates in reproductive health.

WHARC receives core funding and support from the Ford Foundation and technical cooperation and mentorship from International Perspectives on Sexual and Reproductive Health and Studies in Family Planning. Principal funding for the journal comes from the Consortium on Unsafe Abortion in Africa. The goal of the centre is to improve the knowledge of women's reproductive health in Nigeria and other parts of Africa through collaborative research, advocacy, workshops and seminars and through its series of publications – the *African journal of Reproductive Health*, the *Women's Health Forum* and occasional working papers.

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# Revue Africaine de Santé de la Reproduction

Editor: Friday Okonofua

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## APROPOS AJRH

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La Revue Africaine de santé de la Reproduction (RASR) est publiée par le Women's Health and Action Research Centre (WHARC). C'est une revue à la fois pluridisciplinaire et internationale qui publie des articles de recherche originaux, des articles de revue détaillés, de brefs rapports et des commentaires sur la santé de la reproduction en Afrique. La Revue s'efforce de fournir un forum aussi bien à des auteurs africains qu'à des professionnels qui travaillent en Afrique, afin qu'ils puissent partager leurs découvertes dans tous les aspects de la santé de reproduction et diffuser à travers le continent, des informations innovatrices, pertinentes et utiles dans ce domaine de santé de la reproduction.

La RASR est indexée et figure sur l'Index Medicus/MEDLINE. Les résumés et les tables des matières sont publiés en ligne par INASP sur le site web <http://www.ajol.info/ajol> tandis que le texte est publié à <http://www.ajrh.info> par Bioline International sur le site web <http://www.bioline.org.br/>. Il est également résumé dans *Ulrich Periodical*, *feminist Periodical* et *African Books Publishing Records*

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*Km11, Benin-Lagos Express Way*

*P.O Box 10231, Igue-Iheyà*

*Benin City, Edo State, Nigeria*

*<http://www.wharc-online.org>*

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Le WHARC est une organisation non gouvernementale à but non-lucratif s'engageé dans la promotion de santé de la reproduction chez la femme en Afrique sub-saharienne. Fondé en 1995, le Centre a pour objectif principal de mener des recherches pluridisciplinaires et en collaboration, de promouvoir et de former des cadres en matières relatives à la santé de la reproduction chez la femme. Le Centre travaille surtout à travers des groupes multidisciplinaires de chercheurs aussi bien nationaux qu'internationaux en sciences médicales et en sciences économiques dans le domaine de santé de la reproduction.

Le WHARC recoit une aide financière principale de la Fondation Ford et bénéficie de la coopération technique de l'*International Perspectives on Sexual and Reproductive Health* et de *Studies in Family Planning*. Le financencement principale pour la revue vient de la part du Consortium on Unsafe Abortion in Africa. L'objectif du Centre est d'améliorer la connaissance en matière de santé de la reproduction chez la femme au Nigeria et dans d'autres régions d'Afrique à travers la recherche en collaboration, le paidoyer, des ateliers et des séminaires à travers des séries de publication - *La Revue africaine de santé de la reproduction*, *Le Women's Health Forum* et des rapports des recherches de circonstance.

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## EDITORIAL

# Prevention of Child Marriage and Teenage Pregnancy in Africa: Need for more Research and Innovation

*Friday Okonofua*

*Editor, African Journal of Reproductive Health*

Child marriage (defined as marriage before age 18 years) is currently one of the most challenging issues affecting child and adolescent development in substantial parts of Africa. Aggregated data from the UNFPA<sup>1</sup> using DHS, MICS and other household surveys suggests that over 30% of girls in the developing world are married before age 18, and 14% before age 15 years. South East Asia and sub-Saharan Africa have the highest concentration of child marriage in the world, with estimates exceeding the global average in both regions. Rates of child marriage in sub-Saharan Africa vary from as low as 2% in Algeria to as high as 75% in Niger. Within Africa, the practice is most common in West and Central region where up to 41% of girls enter into marital union before the age of 18 years. By contrast, rates of child marriage in East/Southern Africa and the Mediterranean regions are lower at 34% and 15% respectively.

Evidence is increasingly accumulating to suggest that child marriage is not just a religious or cultural practice but is driven largely by poverty, ignorance and illiteracy, gender and social discrimination against the girl child, a misconception of the need to “protect” the girl’s sexuality, sexual impunity bothering on sex trafficking, and inadequate implementation of laws and policies that protect the rights and social development of children and adolescents.

The health and social consequences of child marriage are manifold. Girls married as children are known to experience educational, social, and personal disadvantages as compared to those that marry later. They are locked into social impoverishment right from their early days, and are unable to return to mainstream development in adult life. Child marriage prevents girls from reaching their full educational achievements, enjoying optimal work and health opportunities, bonding with their peers, maturing with full range

of competencies and having the ability to choose their desired life partners.

The reproductive health consequences are even more pervading. Child marriage is now known to account for the high adolescent fertility rate approximating 108/1000 in sub-Saharan Africa<sup>2</sup>, and for the very high overall fertility rates in many parts of the region. This is attested to by evidence showing that countries such as Niger and Mali that have high rates of child marriage also have the highest rates of adolescent fertility (of 192 and 172/1000 respectively) in the world.

Child marriage carries additional health risks including sexually transmitted infections (and possibly HIV/AIDS), cervical cancer, malaria, maternal mortality and obstetrics fistula<sup>3</sup>. Indeed, for a country such as Nigeria, maternal mortality rates are three to four times higher in the Northwest and Northeast regions of the country where child marriage is highly prevalent as compared to the Southwest and Southeast regions, with lower prevalence of child marriage. In those northern Nigeria regions, Kelsey Harrison<sup>4</sup> has shown through his elegant research that most maternal deaths occur in young teenagers, whose birth canals have not matured enough to allow for easy passage of the term baby. This results in obstructed labour, a major cause of maternal mortality in the region. Among those who survive the ordeal, many end up with obstetric fistulae, with continuous lifetime leakage of urine through the vagina. Often such girls are abandoned by their spouses and relatives and left to face the problem alone. Available evidence indicate that of the nearly 2 million girls with obstetric fistulae, mostly in developing countries, up to 800,000 (40%) are resident in Nigeria alone.

Clearly, child marriage is one of the most intolerable and serious human rights and social justice issue of our time. The paper by Mainthia

and colleagues in this issue of the journal<sup>5</sup> which reports that the mean age of a cohort of single mothers in a coastal city in Kenya was 20.2 years, with mean age of pregnancy being 15.9 years is a sober reminder of the social consequences of early pregnancy among immature adolescents in the region. Many of the single mothers in Kenya experienced marital abuse and were chased away by their partners, with many having nowhere to go since they come from impoverished backgrounds. Under such a scenario, the prospects for long term development of these girls appear bleak while the resulting infants, if they survive also face a perilous future.

Despite the traumatic effects of child marriage in sub-Saharan Africa, there have been little concerted efforts by researchers, social advocates, policymakers and public health practitioners in the region to deal with the problem. A recent review of policies and programs across 16 West African States<sup>6</sup> showed that nearly 111 interventions to end child marriage were implemented in the region between 2000 and 2011. However, only 10 of these interventions addressed child marriage prevention as the stated objective, while the majority shied away from dealing with the problem directly. Furthermore, many of these interventions were engineered by international development partners, with local NGOs playing secondary or partial roles. While several governments in the region have enunciated laws and policies that seek to prevent child marriage, with many having child protection acts or statutes, only a few carry out specific programs to implement the policies. A recent attempt by the Nigerian Senate to reverse the age-long constitutional provision that limited the age of marriage to 18 years and above, eloquently testifies to the lack of political commitment to address the problems posed by child marriage in the region.

We conclude this analysis by stating that child marriage prevention is a critically unmet need for research and programming for the protection and promotion of adolescent reproductive health and social development in Africa. Formative research is required that illuminate the social, cultural and economic determinants of the problem in various

parts of the continent, needed to plan culturally relevant and appropriate solutions. Intervention and implementation research are also needed to identify what works and what might not work for child marriage prevention, and how the identified best practices might be translated into effective policies and programs for the eradication of the practice. Most importantly, concentrated efforts need to be devoted to leveraging political commitment at both the national and international levels for ending the practice. The role of the Girl Not Bride (GNB) initiative, whereby prominent international personalities are coalescing efforts to end the practice is already gaining momentum at the international level, but this must be backed up by in-country commitments and national level drive and ownership. Going forward, the extent to which countries address social justice issues such as the prevention of child marriage must be used as a benchmark for measuring the quality of governance in the African region in the coming years.

### ***Conflict of Interest***

None

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## Editoriaux

# Il faut encore plus de recherche et d'innovation dans la prévention de la grossesse chez les enfants et les adolescentes dans les mariages africains

Friday Okonofua

Rédacteur en chef, *Revue Africaine de Santé de la Reproduction*

Le mariage des enfants (définis comme le mariage avant l'âge de 18 ans) est actuellement l'une des plus questions difficiles qui affectent l'enfant et de l'adolescent dans plusieurs régions d'Afrique. Les données agrégées de la FNUAP<sup>1</sup> à l'aide des EDS, MICS et autres enquêtes auprès des ménages indiquent que plus de 30% de filles dans le monde en développement sont mariées avant l'âge de 18 ans, et 14% avant l'âge de 15 ans. L'Asie du Sud-est et en Afrique subsaharienne ont la plus forte concentration du mariage des enfants dans le monde, avec des estimations dépassant la moyenne mondiale dans les deux régions. Les taux de mariage des enfants en Afrique subsaharienne varient d'aussi peu que 2% en Algérie pour atteindre 75 % au Niger. En Afrique, la pratique est la plus courante dans la région de l'Ouest et Centrale, où jusqu'à 41% des filles entrent dans l'union conjugale avant l'âge de 18 ans. En revanche, les taux de mariage des enfants en Afrique de l'est/Afrique australe et la région méditerranéenne sont inférieurs à 34% et 15% respectivement.

Les preuves s'accumulent pour suggérer que le mariage des enfants n'est pas seulement une pratique religieuse ou culturelle, mais est entraînée en grande partie par la pauvreté, et l'ignorance et de l'analphabétisme, l'égalité et la discrimination sociale contre la jeune fille, une idée fausse de la nécessité de «protéger» la sexualité de la jeune fille, l'impunité sexuelle qui dérange sur le trafic sexuel et la mise en œuvre insuffisante des lois et des politiques qui protègent les droits et le développement social des enfants et des adolescents.

Les conséquences sanitaires et sociales du mariage des enfants sont multiples. On sait que les

filles qui sont mariées en tant que des enfants éprouvent désavantages éducatifs, sociaux et personnels par rapport à celles qui se marient plus tard. Elles sont enfermées dans le droit de l'appauvrissement social de leurs débuts, et sont incapables de regagner leur développement courant dans la vie adulte. Le mariage des enfants empêche les filles d'atteindre leurs pleins accomplissements éducatifs, de travailler et de jouir pleinement de la bonne santé, de former des liens affectifs avec leurs pairs, d'atteindre la maturité qui leur permet d'acquérir toutes les compétences possibles et d'avoir l'opportunité de choisir leurs partenaires de vie souhaités.

Les conséquences sur la santé de la reproduction sont encore plus omniprésentes. On sait que le mariage des enfants reflète le taux de fécondité des adolescentes grande approximation 108/1000 en Afrique sub-saharienne<sup>2</sup>, et les taux de fécondité globaux sont très élevés dans de nombreux pays de la région. Cela est attesté par des preuves montrant que des pays comme le Niger et le Mali qui ont des taux élevés de mariages des enfants ont également le plus haut taux de fécondité des adolescentes (de 192 et 172/1000, respectivement) dans le monde.

Le mariage des enfants comporte des risques supplémentaires pour la santé, notamment les infections sexuellement transmissibles (et éventuellement le VIH / SIDA), du cancer du col utérin, le paludisme, la mortalité maternelle et la fistule obstétrique<sup>3</sup>. En effet, pour un pays comme le Nigeria, le taux de mortalité maternelle est trois ou quatre fois plus élevé dans les régions du Nord-Ouest et le Nord du pays où le mariage des enfants est très répandu par rapport aux régions du Sud-ouest et du Sud, avec une prévalence moins élevée

du mariage des enfants. Dans les régions au nord du Nigeria, Kelsey Harrison<sup>4</sup> a montré à travers ses recherches élégantes que la plupart des décès maternels surviennent chez les jeunes adolescents, dont les canaux génitaux n'ont pas suffisamment évolué pour permettre le passage facile du bébé né à terme. Il en résulte une dystocie, une cause majeure de mortalité maternelle dans la région. Parmi celles qui ont survécu à l'épreuve, beaucoup finissent par avoir les fistules obstétricales, avec la fuite d'urine par le vagin. Souvent, ces filles sont abandonnées par leurs conjoints et leurs parents et abandonnées pour affronter le problème seul. Les données disponibles indiquent que près de 2 millions de jeunes filles avec des fistules obstétricales, surtout dans les pays en développement, jusqu'à 800.000 (40%) résident au Nigeria seul.

De toute évidence, le mariage des enfants est l'un des droits de l'homme les plus intolérables et sérieuse et une question de justice sociale de notre temps. L'article de Mainthia et ses collègues dans ce numéro de la revue<sup>5</sup> qui indique que l'âge moyen d'une cohorte de mères célibataires dans une ville côtière du Kenya était de 20,2 ans avec un âge moyen de la grossesse de 15,9 ans est un triste rappel des conséquences sociales des grossesses précoces chez les adolescentes immatures dans la région. Beaucoup de mères célibataires ont été victimes de violence conjugale et ont été chassées par leurs partenaires et beaucoup d'entre elles n'ont nulle part où aller car elles viennent de milieux pauvres. Avec un tel scénario, les perspectives de développement à long terme de ces filles semblent sombres tandis que les nourrissons qui en résultent, si elles survivent font face aussi à un avenir périlleux.

Malgré les effets traumatiques du mariage des enfants en Afrique sub-saharienne, il y a eu peu d'efforts concertés de la part des chercheurs, des militants sociaux, des décideurs et des praticiens de la santé publique de la région pour s'occuper du problème. Une revue récente des politiques et des programmes à travers 16 états ouest africains<sup>6</sup> a montré que près de 111 interventions pour mettre fin aux mariages des enfants ont été mis en œuvre dans la région entre 2000 et 2011. Toutefois, seulement 10 de ces interventions s'occupent de la

prévention des mariages des enfants comme l'objectif déclaré, alors que la majorité hésite encore à traiter le problème directement. En outre, bon nombre de ces interventions ont été conçues par les partenaires internationaux de développement, les ONG locales jouent des rôles secondaires ou partiels. Alors que plusieurs gouvernements de la région ont énoncé des lois et des politiques qui visent à empêcher le mariage des enfants, beaucoup d'entre eux ayant commis des actes de protection de l'enfance ou des statuts, seuls quelques-uns ont réellement exécuté des programmes spécifiques à mettre en œuvre les politiques. Une tentative récente du Sénat nigérian à inverser la disposition séculaire constitutionnel qui limite l'âge du mariage à 18 ans et plus, témoigne éloquemment de l'absence de volonté politique de résoudre les problèmes posés par le mariage des enfants dans la région.

Nous concluons cette analyse en affirmant que la prévention du mariage des enfants est une nécessité critique non satisfaite de recherche et de programmation pour la protection et la promotion de la santé de la reproduction chez les adolescents et du développement social en Afrique. La recherche formative est nécessaire pour éclairer les déterminants sociaux, culturels et économiques du problème dans les différentes régions du continent, pour planifier des solutions culturellement pertinentes et appropriées. La recherche sur l'intervention et la mise en œuvre sont également nécessaires pour identifier ce qui fonctionne et ce qui ne fonctionne pas pour la prévention des mariages des enfants et comment les meilleures pratiques identifiées pourraient être traduites en politiques et programmes efficaces pour l'éradication de la pratique. Plus important encore, la concentration des efforts doivent être consacrées à assurer l'engagement politique aux niveaux national et international pour mettre fin à cette pratique. Le rôle de l'initiative de la fille non-mariée (FNM), par laquelle des personnalités de renommée internationale se coalisent pour mettre fin à la pratique est gagné déjà du terrain au niveau international, mais cela doit être étayés par des engagements dans le pays et d'entraînement au niveau national et de l'appropriation. À l'avenir, la mesure dans laquelle les pays vont résoudre les

questions de justice sociale tels que la prévention des mariages des enfants doit être utilisée comme un point de repère pour mesurer la qualité de la gouvernance dans la région de l'Afrique dans les années qui viennent.

### **Conflit d'intérêts**

Aucun

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## ORIGINAL RESEARCH ARTICLE

# A Model for Improving the Health and Quality of Life of Single Mothers in the Developing World

Rajshri Mainthia<sup>\*1,2</sup>; Laura Reppart<sup>3</sup>; Jim Reppart<sup>3</sup>; Elizabeth C. Pearce<sup>2</sup>; Jordan J. Cohen<sup>2</sup> and James L. Netterville<sup>2</sup>

<sup>1</sup>Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts, USA, <sup>2</sup>Vanderbilt University Medical Center, Nashville, Tennessee, USA, <sup>3</sup>Caris Foundation International, Malindi, Kenya

\*For correspondence: E-mail: [rmainthia@partners.org](mailto:rmainthia@partners.org)

## Abstract

Among the impoverished population of coastal Kenya, there is a rapidly growing group of young single mothers who suffer from adverse health outcomes, incomplete schooling, social ostracism by their communities, and economic hardship. To address this problem, in 2008 the Single Mothers Program (SMP) selected a group of vulnerable single mothers, provided them with basic relief and education, equipped them with training and start-up capital to run their own businesses, and assessed the impact of the program via a pre- and post-implementation survey. After two years in the program, a majority of the single mothers increased their contraceptive use, increased their degree of literacy, increased their individual incomes, and were more positively perceived by their communities. This study demonstrates a program model that can be used to improve the health and quality of life of single mothers and their children in similar communities throughout the world. (*Afr J Reprod Health* 2013; 17[4]: 14-25).

**Keywords:** single mothers, Kenya, quality of life, women's health, microfinance, Africa

## Résumé

Parmi la population pauvre de la côte du Kenya, il y a un groupe en pleine croissance des jeunes mères célibataires qui souffrent de conséquences nocives sur la santé, la scolarisation abandonnée, l'ostracisme social par leurs communautés, et des difficultés économiques. Pour résoudre ce problème, en 2008, le Programme des Mères Célibataires (PMC) a sélectionné un groupe de mères célibataires vulnérables, leur a fourni des secours et de l'éducation de base, leur a donné une formation et le capital initial pour leur permettre de fonctionner leurs propres entreprises et d'évaluer l'impact du programme à travers une enquête pré- et post- exécution. Après deux ans dans le programme, la majorité des mères célibataires ont augmenté leur utilisation de la contraception, ont augmenté leur niveau d'alphabétisation, de leurs revenus individuels et ont perçu plus positivement par leurs communautés. Cette étude démontre un modèle de programme qui peut être utilisé pour améliorer la santé et la qualité de vie des mères célibataires et de leurs enfants dans les communautés pareilles à travers le monde. (*Afr J Reprod Health* 2013; 17[4]: 14-25).

**Mots clés:** mères célibataires, Kenya, qualité de vie, santé des femmes, micro finance, Afrique

## Introduction

Becoming a single mother, especially at an early age, can have a variety of negative consequences on individual women and their families. Early childbearing has been linked to several adverse health outcomes that disproportionately affect women, including maternal morbidity and mortality, abortion, and exposure to sexually transmitted diseases such as HIV/AIDS<sup>1,2</sup>. In addition to these reproductive health issues, early childbearing denies girls the opportunity to

complete education and acquire human capital skills critical for gainful employment. Early childbearing also results in the psychological cost of rejection or social ostracism ranging from disapproval by friends to rejection by the family<sup>3</sup>. In societies where there is an absence of welfare benefits and child support, these outcomes lead to increased dependency, perpetuating poverty and low status of women<sup>3</sup>.

The economic hardships of single mothers are inextricably linked to the fact that fathers generally feel less obligated to support children born out of

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wedlock<sup>4</sup>. In a study in Botswana, less than one fourth of households with premarital births received support from children's fathers<sup>5</sup>. Unfortunately, children's lives are severely affected by these socioeconomic circumstances<sup>6,7</sup>. One study showed that children of never-married and formerly-married mothers have significantly higher probabilities of polio dropout and acute under nutrition than those of monogamously married mothers<sup>8</sup>. In particular, analysis revealed that children of never-married mothers were about 3 times more likely to experience bodily wasting compared to those whose mothers were in monogamous unions.

Early pregnancies are especially detrimental in sub-Saharan African countries, most of which experience high levels of poverty<sup>3</sup>. This study focuses on the coastline of Kenya, a district that the World Bank declared as one of the most impoverished areas of Kenya, with a rural poverty incidence of 69.7% in 2005-2006<sup>9</sup>. The fact that Kenya also had one of the best economic growth rates in Africa in 2005-2006 illustrates that regional disparities in the distribution of poverty remain high. This disparity is illustrated by many "skipped over" people who reside in the coastal regions of Kenya and Tanzania. Beginning in the colonial era, infrastructure as well as schools, hospitals, and businesses developed inland, in the more attractive highlands, where the climate is temperate and the land more arable. This trend continued until the present time leaving the coastal areas much less developed with lower education and literacy levels, compounded by widespread poverty and illness.

During the post-independence period in the 1960s, British settlers to Kenya established holiday homes along the coastline, and were closely followed by European tourists<sup>10</sup>. Malindi, the coastline town in which this study takes place, rapidly moved from being a quiet backwater inhabited largely by Swahili fishermen and traders to a multi-ethnic hub catering to tourists. While tourism has made Malindi quite prosperous compared to other parts of Kenya, local inhabitants of Malindi have seen little benefit from these revenues. Local unemployment is paradoxically high, and the region is dominated by a "consumerist" and "hedonistic" culture in which

fortunes have been made through association with Europeans<sup>10</sup>. Since the 1980s, tourism has continued to be the main industry, with Italians, the main residents and visitors of the town, widely blamed by East Africans for exacerbating a range of social ills, including gambling, prostitution, and drug use<sup>10</sup>.

Among these impoverished coastal people is a rapidly growing group of single mothers. In this paper, a single mother family is one that lacks the presence of the father within the family. Such families exist when there is a divorce in which the husband and wife separate, when the husband dies, or when there is childbearing outside marriage due to unwanted pregnancies. This study focuses on the third category of single mothers, those girls who become mothers unwillingly before age 18. These girls become single mothers at a time when they are not prepared to take care of their children. A majority of these mothers were between 13 to 20 years when they had one or more children, essentially leading to children raising children. Based on pre-study research and interviews, these young, single mothers were generally ostracized and marginalized by their families and communities. A daughter is valued for her ability to bring income into the family through her bride price. When a girl becomes pregnant before marriage her bride price and value are compromised, thus impairing her ability to bring the income, for which she is valued, into the family. She is cast out of the family, out of school, out of society and left to fend on her own<sup>3</sup>. In many cases, these young mothers reside in the streets to find ways to survive, resorting to the readily available sex trade of the slum hovels or tourist beach culture<sup>11</sup>, inevitably resulting in additional pregnancies and additional children born into single mother homes.

To address this problem, two of the authors started the Single Mothers Program in Malindi, Kenya in 2008. The project was funded by the Caris Foundation, a Texas-based non-profit organization (NGO) that aims to provide basic medical, nutrition and welfare needs for impoverished people by working through local communities and implementing solutions that are culturally relevant and sustainable. The SMP selected a group of vulnerable single mothers,

provided them and their children with basic relief and education, and then equipped them with the training and start-up capital to run their own businesses to provide for themselves and their children. The purpose of this study is to show quantitatively and qualitatively how the SMP has affected these women's lives, and to demonstrate a program model that can be used in similar communities throughout the world.

## Methods

### Recruitment

A baseline survey (created by a local NGO, Mulangaza) was administered during interviews of 200 single mothers in the Malindi town area. In order to locate these single mothers, Mulangaza selected 1 female leader in each of 5 sub-locations of Malindi who knew of single mothers in their respective locations. The female leaders also received input from village elders, chiefs, sub-chiefs, and other single mothers. Each female

leader was teamed with one community development worker who helped administer the survey, for a total of 10 enumerators who were each acquired, trained, and supervised by Mulangaza. In order to be eligible for the program, a woman must have become a single mother before age 18. The survey objectives were to establish the existence of single mothers in Malindi, determine the circumstances that lead girls to become single mothers, find out the gaps existing in the single mothers' lives and the coping mechanisms they use to address these gaps, and assess the existing opportunities which are available to improve the lives of single mothers. An interview file of personal information was created for each potential program participant and their family. Upon completion of the survey, the enumerators and project leaders selected the most vulnerable single mothers, ultimately selecting a group of 60 girls and their 107 children to participate in the program. Vulnerability was determined using the criteria in Figure 1.

### Figure 1: Criteria for Intake into Single Mothers Program

Target Group: Single mothers with at least one living child whose age at first pregnancy was 18 years or younger. Those with the highest level of vulnerability will be given priority.

Vulnerability Factors:

1. Family Profile:
  - 1<sup>st</sup> priority
    - i. Orphans
  - 2<sup>nd</sup> priority to those with
    - i. Fathers only
    - ii. Parents with drug addictions
  - 3<sup>rd</sup> priority to:
    - i. Those with abusive parents/other family members such that safety of the SM is at stake
    - ii. Uneducated parents
    - iii. Impoverished parents
2. Residence:
  - i. Those with no permanent residence
  - ii. Those in rented housing
  - iii. Those with no sanitation facilities
  - iv. Those with no clean water supply
  - v. Those whose houses are insubstantial and not protective from the environment
3. Current age of mother:
  - i. Priority on younger mothers
4. Medical condition:
  - i. Priority on those with chronic health conditions
5. Employment status:
  - i. Unemployed

- ii. Self employed
- iii. No skills
- iv. Currently employed but working very long hours for very little pay
- 6. Attitude:
  - i. Priority on those whose attitude is one of hopelessness
- 7. Age of Children:
  - i. Those with newborns or school age children who are not in school
- 8. Condition of Clothing

### **Relief**

At the start of the program, the SMP provided 60 single mothers and their children relief in food supplements, clothing, bed sheets, mosquito nets, hygiene and sanitation packets, and medical needs, including emergency hospital care, immunizations for children, de-worming for children, sanitation and first aid packets, vitamin supplements, and HIV and AIDS prevention, testing, and care.

### **Education & Training**

The goal of training was to provide single mothers with the knowledge and tools to become self reliant and independent, to be able to provide basic needs for themselves and their children, and to become community change agents. Didactic sessions occurred twice a week and included diverse topics such as how to make oil with coconuts (a local resource) for use on the skin and hair rather than having to buy a commercial products, how to treat mosquito nets with insecticide, information about HIV/AIDS prevention and management, sexual awareness and behavior, communication skills, family planning, nutrition and health care, and child care. The training also focused on equipping the single mothers with skills that would enable them to engage in income-generating work and ultimately become financially independent. The seminars included “Group Management and Leadership Skills,” “Savings,” “Business and Financial Management,” and “Credit.”

After the initial training period, staff conducted one-on-one interviews with each single mother to determine their educational goals and needs, their skills and training, their business experience if any, their current business capital, and their hopes and plans. Interview feedback indicated that the

basic skills that the single mothers wished to explore included tailoring, catering, housekeeping, hair dressing, setting up their own kiosk (to sell items such as charcoal, used cloths, and basic food), handcrafts, and additional schooling. To start, the program hosted two camps that brought in outside professionals to train staff and then these staff members trained the single mothers. During the training camps, the single mothers devised a plan for opening their businesses and staff members assisted each single mother with making supply and equipment lists. This then determined what start-up capital would be needed to set up each single mother’s small scale business in their area of interest, with a ceiling amount of 4,000 Kenyan shillings (approximately 50 USD) available for each boost. Centralized training at the program headquarters (rather than training in local institutions) was utilized to reduce absenteeism, increase the ability to monitor and supervise, minimize cost of resources, foster better performance, accountability, and partnerships within the single mothers group, provide multiple areas of training in a day, and provide centralized child care. In addition, many of the single mothers enrolled in the program did not have the pre-requisites (i.e. literacy skills) to be trained in local training centers.

### **Sustainability**

Since the ultimate goal of the program was to help the single mothers become financially and personally independent, the final phase of the program involved making sure that the single mothers could sustain themselves without financial assistance. Before they entered the program, a majority of single mothers felt isolated among their community and this isolation often led to hopelessness and abuse. Thus, several small group activities were incorporated into the program to

provide a forum for relationship building, savings and loan groups, brainstorming and problem solving about the challenges of their businesses and daily lives, and sharing success stories. For the sustainability phase, small groups transitioned from occurring at the program's headquarters to occurring in the home areas of the single mothers. Model structures were developed with patterns that could be followed without program participation.

The biggest of these small groups to emerge during the sustainability phase were savings groups or TTGs. TTG means is an acronym for "Tujalie Tujisaidie Group" which is translated as "Help us help ourselves." A TTG is an informal association of people in a community who come together for their economic and social development, empowerment and overall development of their area. A benefit of saving in groups rather than individually is that the commitment to a group is higher than the responsibility to help their families or neighbors<sup>12,13</sup>, except in emergencies. Before these groups, single mothers felt obligated to give their profits to relatives or neighbours in order to meet their social responsibilities. The savings groups aimed to help the single mothers keep their profits for reinvestment in their businesses and to cover school fees for their children.

The TTG size ranged from 15-20 members, membership was voluntary, and the groups were not political and not religious. The TTGs featured homogeneity in terms of similarities in gender, economic status, and geographic area and group leadership was rotational – every member of the group had the opportunity to become a moderator, book writer, or group representative. The functions of the TTGs included meeting every week, contributing savings at every meeting, managing savings by setting rules relating to loan prioritization and interest to be charged for loans, monitoring credit utilization, ensuring regular payment of loans, maintaining required books of accounts, and establishing linkage with government departments.

### ***Mentoring and Monitoring***

In order to monitor how the relief was being used, check on the understanding of the training, offer

encouragement for challenges or problems, and mentor at an individual level, staff field workers made individual home visits to single mothers once a week. A record system was created to help monitor the progress of each participant in the program, assess whether or not goals were being met, and provide a road map for future multiplication. Records of home visits, medical assistance, attendance at group meetings and training, and relief given were all recorded using different evaluation forms. All single mothers enrolled in the program were expected to attend every training session.

**Table 1:** Budget for Single Mothers Program 2008-2009 (Start-up Phase)

	<b>Kenyan shillings</b>	<b>USD (\$)</b> <i>Exchange Rate:</i> <i>\$1 = 70ksh</i>
Record Keeping	3,560	50.86
Bedding & Mosquito Nets	206,620	2,951.71
Clothing	147,745	2,110.64
Food & Nutrition	622,017	8,885.96
Medical Care & Hygiene	97,040	1,386.29
Relief Preparation & Setup	27,000	385.71
Relief Transport (Tuk Tuks)	73,363	1,048.04
Relief Workers and Educators	255,162	3,645.17
Salaries for Program Workers	407,838	5,826.26
Bread Baking Course & Supplies	39,716	567.37
Business Training Course & Supplies	486,327	6,947.53
Hairdressing Training Course & Supplies	287,855	4,112.21
Literacy Training Expenses	7,930	113.29
School Fees and Tuition	177,971	2,542.44
Small Business Boost	94,492	1,349.89
Tailoring Course & Supplies	741,330	10,590.43
<b>Total for 60 Single Mothers and their 100+ Children</b>	<b>3,675,966</b>	<b>52,513.80</b>

### ***Costs***

The SMP was funded by the Caris Foundation, a Texas-based NGO. Key budgets items for 2008-2009 and 2010 are shown in Tables 1 and 2, respectively. The leaders of the SMP offered

salaries and benefits to the staff that were consistent with those of other international NGOs.

**Table 2:** Budget for Single Mothers Program 2010

	Kenyan shillings	USD (\$) Exchange Rate: \$1 = 70ksh
Salary for Program Workers (8) + Medical Care, Pension, & Transport for Staff	3,541,200	50,588.57
Teachers	120,000	1,714.29
Staff Training	180,000	2,571.00
Training Equipment	140,000	2,000.00
Transport	180,000	2,571.43
Food (Discontinued July 2010)	1,500,000	21,428.57
Clothing	150,000	2,142.86
Medical Care	240,000	3,428.57
Tailoring Course & Supplies	670,000	9,571.43
Bread Baking Supplies	27,000	385.71
Small Business Boost	100,000	1,428.57
School Fees and Tuition	115,000	1,642.86
<b>Total for 52 Single Mothers and their 100+ Children</b>	<b>6,963,200</b>	<b>99,473.86</b>

### Evaluation

A shortened version of the Mulangaza survey (26-question subset) was used for a pre-assessment (October 2008) and post-assessment (November 2010) of the program. Quantitative and qualitative data was gathered on single mother's quality of life, standard of living, sexual health, and literacy. The survey was translated in Swahili by hired bilingual translators for the single mothers who could not speak English. Each survey took approximately 1 hour to complete. The response rate for the 2008 survey was 100% (60 out of 60 single mothers) while the response rate for the 2010 survey was 83.3% (50 out of the original 60 single mothers). Study data were managed using RED Cap (Research Electronic Data Capture) electronic database<sup>14</sup>. The Vanderbilt Institutional Review Board approved this study.

## Results

### Recruitment

Sixty single mothers with 105 children were enrolled into the SMP in October 2008. The mean age of the single mothers entering the program was 20.2. The average age at first pregnancy was 15.9. At the start of the program, 15% of the single mothers did not have a mother and 44% did not have a father. Of the single mothers, 45% were in school when they first got pregnant and 55% were not in school. When the single mothers first got pregnant, 12% had lost a mother and 35% has lost a father to death. Forty percent of the single mothers said that their father did not live with them growing up, and 17% said that their mother did not live with them growing up. Thirty-eight percent of single mothers were "chased away" from home when they first got pregnant, meaning that their parents or guardians forced them to leave their home at least for some period of time.

Of the single mothers entering the program, 85.7% left during primary school (grades 1-8), 4.1% left during secondary school (high school) and 10.2% never went to school. The average age for leaving school was 15.3. Reasons for leaving school included pregnancy (48.8%), not being able to pay school fees (34.9%), sickness (4.7%), and other reasons (11.6%).

Seventy-two point three per cent of single mothers received no support from the father of the child. Support included visitation, and financial support for child necessities such as medical care, clothing, shelter, school fees, and food. When asked how long the father of the first child stayed after finding out that she was pregnant, 53.1% of single mothers said "not at all," 6.1% said "up to one month," 18.4% said "up to six months," and 22.4% said "over six months." When asked where the father of the child lives, 18% said "don't know," 22% said "same town," and 61% said "another town."

In response to "What are the everyday challenges faced by single mothers in Kenya?" the top five responses included "being discriminated against from family and/or community" (58.3%), "lack of money to provide basic needs (food, clothing, shelter) for children" (37.5%),

“poverty/going hungry” (35.4%), “raising children alone” (27.1%), and “abuse from family and/or being chased away from home” (22.9%). “Being discriminated against” included being excluded from mixing with married women, being verbally insulted and/or mocked, and being rejected and/or ignored by family and community members.

**Table 3:** Descriptive information about single mothers who stayed active in the program or self-graduated versus single mothers who became inactive or left the program as of 2010

	Active / Self-Grads	% of Group	Inactive / Left	% of Group
<b>Total number</b>	42		10	
<b>Gave Birth After Initiation of Program</b>	4	10%	5	50%
<b>Income-generating activity</b>				
Small Scale Business	18	43%	8	80%
Tailoring	17	40%	0	0%
Hairdressing	4	10%	2	20%
Formal Schooling	3	7%	0	0%
<b>Age</b>				
<18 years old	5	12%	4	40%
18 years or older	37	88%	6	60%
<b>Literacy level</b>				
Illiterate	14	33%	6	60%
Semi-literate	16	38%	4	40%
Literate	12	29%	0	0%

### Relief

The relief consisted of maize meal, rice, beans, oil, and soap. Enriched baby porridge and milk were included when age appropriate. The amount received was scheduled according to the age and number of each single mother’s children. The food relief was directly tied to the single mother’s participation in the training programs. In order to receive the relief she must have followed the guidelines of the program and attended every training session or group meeting that was scheduled each week. The relief was ordered, delivered and distributed weekly. This minimized the need for storage, as well as the possibility of the relief being stolen or used fraudulently. It also ensured that the products were fresh when distributed. In 2008, the average number of meals

consumed per day by each single mother was 2.4. When surveyed again in 2010, the average number of meals consumed was 2.8.

### Health care

Before enrolling in the SMP, 88% of single mothers had been tested for HIV. Of these single mothers, 2 were HIV positive and 1 of these 2 was being treated. After enrolling in the SMP, all participants were tested for HIV and 2 additional single mothers were found to be HIV positive. All 4 mothers who tested positive were given appropriate counselling and treatment. One of these 4 women had just given birth and was thus provided with formula to prevent mother-to-child transmission of HIV. All single mothers in the program also received a mosquito net and were taught how to treat it with insecticide. All 105 children were weighed, measured, and de-wormed. Thirty-four young boys of single mothers were circumcised.

A review of hospital receipts indicated that many of the single mothers and/or their children were treated at the local hospital multiple times. There was a wide range of diagnoses, including upper respiratory infections, malaria, scabies, anaemia, parasite illnesses, wounds resulting from accidents, and chronic ulcers. Throughout the duration of the program, the peak use of medical services occurred in July, likely due to the rainy season when malaria and flu are more prevalent.

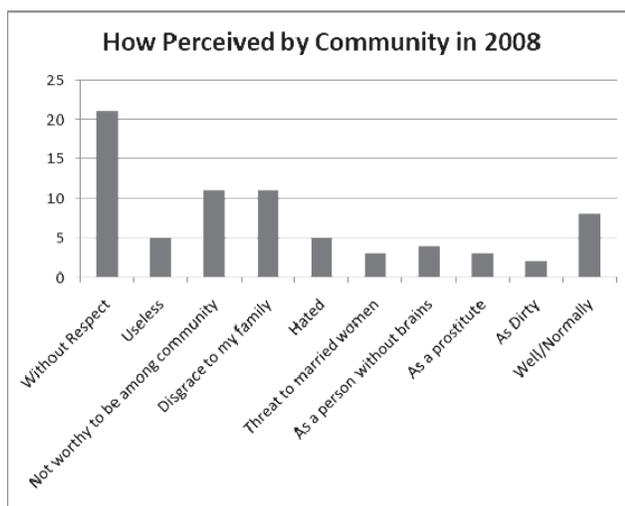
### Sexual health

When entering the program, 43% of single mothers had had 1 sexual partner, 53% had had between 2-5 sexual partners, and 2% had had more than 5 sexual partners. When surveyed in 2010, 30% of single mothers had had 0 sexual partners since enrolling in the SMP (93% who said they were practicing abstinence), 53% had had 1 sexual partner, and 17% had had greater than 2 sexual partners. When asked about condom use in 2008, 8% of single mothers used a condom “every time,” 35% used a condom “sometimes,” and 56% never used a condom. Forty-one percent of single mothers used a form of birth control aside from condoms. In 2010, of those that have sex, 21% used a condom “every time,” 44% used a condom

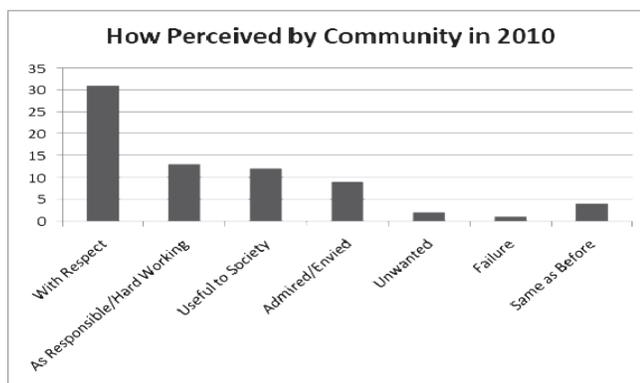
“sometimes,” and 35% never used a condom.” Sixty-five percent of single mothers used a form of birth control aside from condoms. In both 2008 and 2010, injectable birth control was the leading form of alternate birth control.

### Community Perceptions

In a free response question, single mothers were asked how they were perceived by the community in 2008 and in 2010. Figure 2 shows the responses in 2008 and 2010 with the top 2008 responses being “Without respect,” “Not worthy to be among community,” and “Disgrace to family” and the top 2010 responses being “With respect” and “As responsible/hard working.”



**Figure 2a:** Community perceptions of SMP single mothers in 2008



**Figure 2b:** Community perceptions of SMP single mothers in 2010

### Literacy

An adult literacy teacher developed criteria for testing and rating the single mothers according to the following definitions: Illiterate = no reading or writing skills, Poor = able to write letters and numbers but not able to read, Moderate = able to read and write but not fluent, Good = can read and write fluently with understanding of sentences and passages. In 2008, 29% of single mothers were evaluated as being illiterate, 12% as having poor literacy, 17% as having moderate literacy, and 21% as having good literacy. In 2010, 2% were evaluated to be illiterate, 30% as having poor literacy, 17% as having moderate literacy, and 50% as having good literacy. The most significant changes occurred in the “illiterate” category (29% to 2% of single mothers) and “good” category (21% to 50% of single mothers), from 2008 to 2010. Qualitative data from 2010 indicated that some of the ways that an increase in literacy has improved quality of life include ability to sign one’s name to open a bank account, keep business records, read a newsletter to find their child’s test results, understand written school notices, and help their children with homework.

### Income-Generating Activities

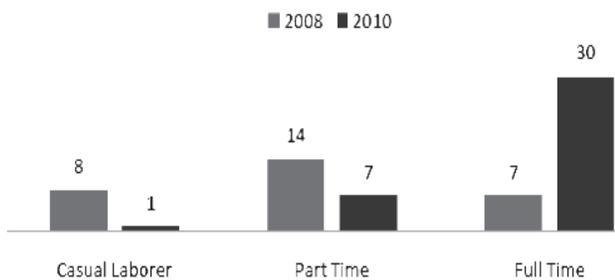
One year after the start of the program, 25 single mothers in the Small Scale Business training track were given an “economic boost” to help them initiate their small businesses. The total amount given to each of these single mothers was 81,977 ksh. This is an average of 3726 ksh per single mother or about \$40.00. Stock and equipment for 25 small scale businesses was purchased. Immediate visible results from this financial training and boost included multiple kiosks built and supplied with everyday merchandise, small businesses becoming profitable, a garden yielding enough produce to sustain a family, single mothers putting aside savings for the first time, houses built, personal ownership of land and houses, business collaboration between single mothers who have completed tailoring school, a bread-baking business, and initially no new pregnancies.

Three months after the boost, the single mothers had been categorized by their levels of

success with their small scale business efforts. Thirty-six per cent of the single mothers were characterized as “building their business,” meaning they had been able to build a structure, add more stock, or begin saving their profit. Twenty-seven per cent were characterized as “maintaining their business,” meaning that their business continued on the same level with the stock being replenished but no discernible growth made. Twenty-three per cent were characterized as “failed,” indicating that their business had stopped or supplies and equipment had decreased or been destroyed by rats or fire.

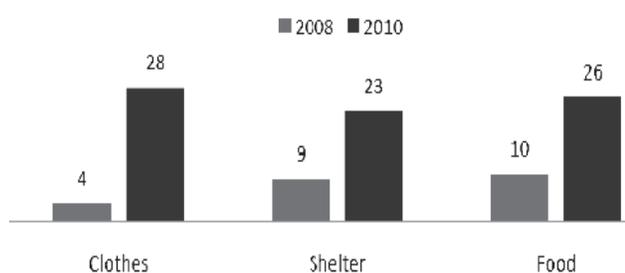
In terms of formal skills training, 18 single mothers entered tailoring school, 6 entered hairdressing school, 1 entered catering school, 4 pursued formal primary or secondary school education, and 1 entered university to pursue a degree in Community Development and Social Work.

### Employment Description



**Figure 3:** Single mother self-reported employment description in 2008 and 2010

### Income is Able to Meet Basic Needs



**Figure 4:** Ability of single mothers' income to meet basic needs in 2008 and 2010

Figure 3 illustrates the change in single mother employment description from 2008 to 2010. In 2010, 30 of the single mothers considered themselves engaged in full time income generating activities, compared to only 7 in 2008. The number of casual labourers decreased to only 1 in 2010. At both time points, single mothers were also queried about whether their income met their basic needs of clothes, shelter, and food. Figure 4 shows an increased ability of single mothers in the program to meet these daily requirements from 2008 to 2010.

### Group activities

Small group meetings empowered single mothers with respect to self-esteem and organizational skills, and provided a social support network for realization and execution of entrepreneurial possibilities. From 2008 to 2010, involvement in group activities increased from 4% of single mothers participating in group activities in 2008 to 96% in 2010.

### Retention and current status

When the SMP began in 2008, 60 single mothers and their 107 children became part of the program. At one year into the program, 52 single mothers with 104 children continued to participate, for a retention rate of 86.7%. Of the 8 participants who left the program at this point, 6 withdrew, 1 was asked to withdraw for disturbing the other women, and 1 died.

Two years into the program in 2010, of the 60 original participants in the program, 35 (58%) were still active, 7 (12%) self-graduated, or reached the goal of being able to sustain themselves and their children, 6 (10%) were inactive, and 12 (20%) left the program. Table 3 compares those single mothers who stayed active in the program or self-graduated versus single mothers who became inactive or left the program.

These results indicate that those in the “Inactive/Left” group were more likely than those who stayed in the program or self-graduated to give birth during the program (50% versus 10%).

The single mothers who were inactive or left were also more likely to have run a small scale

business (such as running a food kiosk) as opposed to participating in work that required additional

There were a higher percentage of single mothers under the age of 18 who became inactive or left versus stayed active or self-graduated and most of the individuals who became inactive or left were illiterate (60%).

## Discussion

The SMP initially provided 60 single mothers and their 105 children with nutritional relief, health care, education, business training and start-up capital. In the next phase of the program, relief was tapered and the program focused on transitioning single mothers from earning and saving within the program to participating in small savings groups within their communities in order to make the impact of the program more sustainable. Quantitatively, this study showed that after 2 years in the program, a majority of the single mothers increased their contraceptive use, had an increased degree of literacy, increased their individual incomes, increased participation in supportive and income-generating group activities, and increased their use of mosquito nets. Qualitatively, this study showed that the single mothers were more positively perceived by their communities and were more able to fulfil their basic needs of clothing, shelter, and food with their own income. Most importantly, this program reached out to single mothers during a vulnerable period—when many of them were still teenagers and new mothers with no income, when they had recently dropped out of primary or secondary school, and when they were at a higher risk for participating in the local sex trade or becoming involved with other men in a financially-dependent way. Thus, one of the greatest benefits of the program may be the number of additional pregnancies it helped prevent. It has been shown that women who already have a mistimed or unwanted birth are significantly more likely than others to have another unplanned birth<sup>15</sup>. This is supported by an earlier study done in low-income urban communities that found that abortion was more common among women who had previously given birth<sup>16</sup>. Considering these findings, the 5-10 year outcomes of this program, even with an initial

vocation training (such as tailoring, hairdressing, or pursuing further schooling).

sample size of 60, could be staggering. If similar populations around the world could also address this task of empowering young single mothers and their children in their most vulnerable states, the health and quality of life of single mothers and their children could be significantly improved. Looking forward, it will be important to longitudinally assess the health and survival of the children of these single mothers to better qualify and quantify the impact.

The success of this program also begs the question of what intervention can address the actions and lack of education of the fathers of the single mother's children. In this study, a staggering 72.3% of single mothers received no support from the father of the child. In some cases, early childbearing led to the formation of subfamilies within larger households, thus mitigating the adverse consequences of single parenthood through the distribution of parenting costs and responsibilities across family members. However, more commonly, an unwed mother was considered an embarrassment to her clan and had neither moral nor normative claim to her natal family's resources. Thus, the thought of the same father, not having suffered any consequences, making another girl pregnant is worrisome; in fact, in a period of 5-10 years, these fathers could contribute to the formation of multiple single parent households in which the mother is providing everything for herself and her child, often within the backdrop of being ostracized from her family and/or community and having to drop out of school.

### *Risk factors*

Also interesting to note is the profile of the single mothers who entered the program. Studies have demonstrated that peer pressure, idleness, poverty (need for money or material gains) and lack of parental guidance, coupled by low contraceptive use have been mentioned as some of the factors likely to influence and encourage pre-marital sex<sup>17,18</sup>. This study corroborated many these findings. Over half of the single mothers were not in school when they got pregnant, and of those

who were in school, the majority dropped out due to their pregnancy and/or their inability to pay school fees. In terms of parental guidance, it was interesting to note that 40% of single mothers grew up in a household without their father. This could suggest that girls who lack a father during their own childhood may be at additional risk of becoming a single mother, an important consideration for single mothers as they raise their own daughters.

Similarly interesting is the profile of those who left the program or became inactive (Table 3). This group was more likely to be under the age of 18, be illiterate, give birth during the program, and have pursued a small scale business rather than have undergone skills training. This data suggests several future considerations for the program. First, these trends may help determine which project participants are more at risk so that a system can be in place to provide these single mothers with more attention to encourage their success. Particularly, increased emphasis should be placed on teaching reading and writing skills to illiterate single mothers early in the program so these single mothers can benefit maximally from the education and training sessions. Second, since those who continue to give birth are less likely to continue in the program, sex education and abstinence should have ongoing emphasis throughout the program. Third, these trends may indicate that those who are given specialized skills training and business training have a higher chance of reaching the program goals as compared to those who are given business training alone.

### ***Future directions***

For this program to have a greater impact, it must focus on prevention. Levels of reproductive health awareness among the Kenyan youth are lower than that of adults<sup>19</sup>, and in particular, young and uneducated women have been found to struggle with accessing contraceptive information and counselling services than older and educated women<sup>20</sup>. In one study on the determinants of teenage pregnancy, the majority of adolescents surveyed overwhelmingly felt that access to family life education and counselling was the most effective way of curbing teenage pregnancies<sup>15</sup>.

Considering the lifelong impact that one unplanned pregnancy can have on a single mother and the community she lives in, education regarding early sexual behavior and its consequences needs to be emphasized more strongly and frequently within communities. In Kenya, the Nyanza, Coast, and Western provinces are regions where the lowest contraceptive prevalence in the country has been recorded<sup>21</sup>. Thus, there must be increased access to sex education and birth control methods, including detailed information regarding use, effectiveness and reliability, especially in rural areas with high levels of illiteracy<sup>15</sup>.

Ultimately, the best method of preventing early, unplanned childbearing is not only lecturing school girls on the consequences of unsafe premarital sex; it is also encouraging them to be economically independent. Financial instability and poverty have been shown to be key predictors of women's risky sexual behaviors<sup>22</sup>. In African countries such as Kenya, women may have fewer employment opportunities compared to men because of lower rates of school completion and greater likelihood of prior work in informal, lower-paying segments of the economy<sup>23</sup>. Also, research on US-based samples have also suggested that adolescents who have low expectations for their futures may feel that they have "nothing to lose" by their risky behavior<sup>24,25</sup>. This program has shown that if girls are given the opportunity for economic development and hope for their future they can in turn become sexually responsible. Looking forward, if this program is to ultimately have an impact on the thousands of young single mothers in the coastal area of Kenya, the graduating single mothers need to lead a rippling economic movement within their own communities and encourage their younger peers to stay in school.

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