



## Research article

## Restavèk children in context: Wellbeing compared to other Haitian children



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## ABSTRACT

In Haiti, large numbers of vulnerable children and the country's particular historical context has led to a unique phenomenon known as the "restavèk" system. An estimated 300,000 Haitian children are restavèks, living as unpaid domestic servants. Child-welfare advocates describe the restavèk system as modern slavery, but researchers and advocates lack information about restavèk children's circumstances, particularly vis-à-vis other children in Haiti. In a cross-sectional analysis of a nationally representative sample, we evaluated differences in well-being (school attendance, work responsibilities, physical abuse, and hunger) between restavèk children and: (a) all non-restavèk children; and (b) the poorest quintile of non-restavèk children. As compared to all Haitian children and the poorest Haitian children, restavèk children have statistically significantly lower school attendance rates and more labor responsibilities. However, restavèk children experience statistically significantly less physical abuse and less hunger than non-restavèk Haitian children. The restavèk system remains active in Haiti because poor families lack basic resources to support their children, and restavèk children are at risk for mistreatment due to their vulnerable social status. The surprising finding that restavèk children are better off in some respects than their non-restavèk peers highlights the desperate poverty in Haiti and suggests that structural changes for poverty reduction will be required before the restavèk system will end.

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## Introduction

Haiti is the poorest and least-developed country in the Western Hemisphere, with 78% of the population living on less than \$2 per day (UNICEF, 2013; The World Bank, 2013). Children, who make up nearly 40% of Haiti's 10 million people, are particularly vulnerable. Haitian children experience the highest infant mortality rate and under-five mortality rate of any country in North or South America (UNICEF, 2013). Eight percent of all Haitian children are orphans, having lost one or both parents (The World Bank, 2013). The large numbers of vulnerable children, and the particular historical context of the Haitian nation, has led to a phenomenon, unique to Haiti, known as the "restavèk" system.

In Haiti's national language, Haitian Creole, the word restavèk literally translates to "to stay with" (Leeds et al., 2010). The magnitude of the phenomenon is not well known. In the 2012 Haitian Demographic and Health Survey (DHS), an estimated 18.2% of children less than 15 years of age were not living with any of their biological parents, a percentage similar to that

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observed in the 2006 DHS survey (Cayemittes et al., 2013). According to reports from international NGOs, it is estimated that between 150,000 and 500,000 children in Haiti are restavèks (Shahinian, 2009; Smucker & Murray, 2004). Typically, restavèk children are girls who are sent to live with a wealthier host family where they work as unpaid domestic servants (Shahinian, 2009; Pierre, Smucker, & Tardieu, 2009; Cooper, Diego-Rosell, & Gogue, 2012; Smucker & Murray, 2004). The system has developed because rural families – living in poverty and unable to support their children – hope that if their children live with wealthier urban families they may be able to go to school and have access to a better life (Pierre et al., 2009; Cooper et al., 2012).

While research on restavèk children is scant and mostly advocacy driven or case- reports, (Leeds et al., 2010; Restavèk Freedom, 2011; Smucker & Murray, 2004) many writers refer to restavèk children as “modern day slaves.” (Pierre et al., 2009; Shahinian, 2009; Cooper et al., 2012; Smucker & Murray, 2004). The United Nation (UN) defines a slave as “a person who is by law, custom, or agreement bound to live and labor on land belonging to another person and to render some determinate service to such person, and is not free to change his status” (United Nations Human Rights, 1956). And indeed, the UN considers the restavèk system slavery because children may be trafficked for profit by middlemen recruiters (Shahinian, 2009; Pierre et al., 2009; Cooper et al., 2012; Smucker & Murray, 2004). However, some recent reports indicate that the role of intermediaries may have been overstated, and more frequency arrangements are made directly between the sending and receiving families (Cooper et al., 2012).

Additionally, the restavèk system has been considered slavery because of reports that children are not informed about what is happening and often lose contact with their families (Shahinian, 2009; Cooper et al., 2012). In contrast to these assertions, however, Cooper et al. (2012) in a study conducted by the US Department of Labor suggest that restavèk children are free to leave when they choose, but typically do not because they have no place better to go. Furthermore, we have little evidence to suggest that families feel pressured to place their children as restavèks; instead they may do it because it seems like the best option for the child (Cooper et al., 2012; Smucker & Murray, 2004).

The restavèk system is seen by many Haitians as an acceptable activity, with deep roots in the country’s culture and as a practice beneficial to poor families and restavèk children (Cooper et al., 2012). Historically, the system was in place to provide opportunities to the poorest people in society, and similar practices are seen throughout sub-Saharan Africa and Asia, whereby poor children are sent to live with wealthier relatives (Thorsen, 2012; Klocker, 2011; Isiugo-Abanihe, 1985). While most research about restavèk children makes little distinction between slavery and child labor, and ignores the significant heterogeneity of restavèk children’s experiences, Cooper et al. (2012) showed significant variation in the treatment of restavèk children and found that most restavèk children reside with extended family or somebody the family knows and trusts. However, while the practice may be acceptable to many, the term “restavèk” carries stigma: at best restavèk children are seen as orphans who have no secure place in society (Cooper et al., 2012; Smucker & Murray, 2004). Mistreatment may therefore be customary and accepted. Objective reports indicate that restavèk children work long unpaid days, leaving them little access to education and recreation and at risk of psychological damage because of limited leisure time and absence of support and affection (Cooper et al., 2012). Additionally, restavèk children are vulnerable to risks such as carrying heavy loads, exposure to hazardous chemicals, or being burned (Cooper et al., 2012; Smucker & Murray, 2004). In sum, those concerned with child welfare have conflicting and insufficient evidence about the well being of this vulnerable group of children. In particular, we seek to understand the conditions of restavèk children as compared to the conditions of non-restavèk children in Haiti.

While we know some social and psychological implications of growing up in absolute poverty, (Spencer, 2000) little attention has been given to the effect of being a restavèk on a child’s development (Shahinian, 2009). Unable to assess child development directly, we utilize four factors important to child development: education, physical abuse, labor, and hunger. Children’s access to education has been shown to affect cognitive development substantially in the early childhood years. Beyond subject matter, school attendance affects the dynamics of the child’s thought processes, behavior, socialization and learning capacity (Campbell, Pungelio, Miller-Johnson, Buchinal, & Ramey, 2001). With respect to abuse, people who experience abuse as children have markedly increased risk of cognitive dysfunction as adults and can experience lasting changes in their central nervous system (Heim, Shugart, Craighead, & Nemeroff, 2010). Additionally, children exposed to high levels of labor are at a high risk of physical, social, or psychological stress, which can be detrimental to social and psychological development (Huebler, 2008). Finally, persistent hunger is highly detrimental to child development (McLoyd & Wilson, 1990). Children who reside in homes that experience food insecurity are more likely to be malnourished, and lack of nourishment leads to poor immune function, delayed brain development, stunting and wasting, problems with organ function, increased risk of parasites, and difficulties learning (Ampaabeng & Tan, 2013). We premise our study on the assumption that children enrolled in school, not experiencing physical abuse, engaging in low levels of labor, and having access to food will experience better development, compared to children who do not attend school, experience a high level of abuse, engage in high levels of labor, and are hungry.

We conducted an analysis of a nationally representative data set to evaluate the differences between access to education, experience of physical abuse, level of labor, and experience of hunger of restavèk children as compared to all non-restavèk children in Haiti. We also examine the condition of restavèk children in these four areas as compared to the poorest Haitian children who are not restavèks. By comparing restavèk children to the population from which they were most likely drawn, we evaluate whether the system provides harms or benefits to restavèk children in these domains.

## Methods

### Study design

This analysis uses cross-section data from the 2012 Haitian DHS. The survey was conducted by the Haitian Childhood Institute in all 10 departments of Haiti from January to June 2012. It used a two-stage sampling strategy to select a nationally representative sample of 13,181 households. The 2012 Haitian DHS is a publicly available dataset. More information about survey design, data collection, and data management is available in the final report (Cayemittes et al., 2013).

### Study population

We include in this analysis all children aged 5–14 years, as this represents the range of ages of restavèk children in the database.

### Measures

The DHS Program was designed to collect comparable data across countries, and this is accomplished through the implementation of a standardized questionnaire. The household questionnaire, utilized in this study, collects information on the household itself as well as each member residing in the household (Cayemittes et al., 2013).

*Restavèk status* was the main variable of interest for this study. During interviews, households with children under the age of 18 who were not the biological offspring of the participant were asked if that child was a restavèk. All children for whom the response to this question was affirmative were classified as a restavèk.

### General wellbeing variables

Four variables were used to describe the general wellbeing of the children:

*School enrollment:* Adult respondents indicated if each child in the household had attended school at any time during the 2011–2012 school year. Children who were enrolled at any point during the 2011–2012 school year were classified as “currently enrolled” in school.

*Physical abuse:* Adult respondents indicated if each child had ever been hit in the face or ever been “beaten as strongly as possible.” Affirmative responses were classified as having experienced physical abuse.

*Child labor:* The labor variable was a scaled variable created from four different labor variables: “worked for somebody outside of the household,” “fetched wood or water,” “worked for a family member,” and “did domestic household work.” If the adult respondent indicated that the child engaged in zero or one of these forms of labor, the child was considered to have a low level of labor. The child was classified as having a medium level of labor if it was reported that he or she engaged in two forms of labor. If the child engaged in three or four forms of labor, the child was considered to have a high level of labor.

*Hunger:* Adult respondents indicated if each child in the household had “laid down in hunger” in the past month or had gone without food for greater than 24 h in the past month. Children for whom the response was “always” or “sometimes” to either of these survey questions were classified as having experienced hunger.

Other variables considered in this analysis include: individual demographics (sex, age, parent living status), household demographics (family size, location of household), and the wealth index of the household. The parent living status was created by combining “Mother alive” and “Father alive” variables into a categorical variable. Wealth index is a DHS-created composite measure of the household’s living standard, including the ownership of assets, the materials utilized in the household construction, type of water access, and sanitation facilities. Those variables were selected a priori on the base of subject matter knowledge as potentially being associated with restavèk status and either of the four indicator of child wellbeing.

### Statistical analysis

*Weighting.* DHS surveys are designed to over-sample in regions with small populations. In order to ensure sample representativity, sample weights were utilized for all analyses.

*Statistics analysis.* Restavèk children were compared to non-restavèk children for their wellbeing and other socio-demographic characteristics using Chi-square or Wilcoxon signed-rank test as appropriate (Rothman, 2012). Simple and multivariate logistic regression models were used to estimate the crude and adjusted odds ratio and 95% confidence interval (95%CI) assessing the strength of the association between restavèk status and the key characteristics considered (Rothman, 2012). In addition to restavèk as outcome variable and the four indicators of child wellbeing as exposure variables, the multivariate model included all the selected individual and household demographic variables. In a sensitivity analysis, we stratified the analysis by gender to see if the association between restavèk status and wellbeing indicators varies by sex.

**Table 1**  
Characteristics of children 5–14 years in Haiti's 2012 Demographic and Health Survey ( $n = 13,907^*$ ).

	<i>n</i>	(%)
<b>Restavèk status</b>		
Restavèk	245	(1.8)
Non-Restavèk	13,661	(98.2)
<b>Sex of child</b>		
Male	7,097	(51.0)
Female	6,810	(49.0)
<b>Location</b>		
Urban	4,967	(35.7)
Rural	8,940	(64.3)
<b>Parents alive</b>		
Both	12,002	(86.7)
One	1,647	(11.9)
Orphan	186	(1.3)
<b>Wealth index</b>		
Poor	6,321	(45.4)
Middle	2,861	(20.6)
Rich	4,726	(34.0)
<b>Education</b>		
Currently enrolled	12,855	(92.5)
Not currently enrolled	1,045	(7.5)
<b>Physical abuse</b>		
None	11,576	(83.6)
Some	2,274	(16.4)
<b>Child labor</b>		
Low	5,006	(36.4)
Medium	5,171	(37.6)
High	3,580	(26.0)
<b>Hunger</b>		
Yes	9,492	(68.3)
No	4,411	(31.7)
<b>Age in years: median (IQR)</b>	9.2	(6.6, 11.6)
<b>Family Size: median (IQR)</b>	5.6	(4.1, 7.3)

IQR is the interquartile range, also known as the middle 50%.

\* Weight frequencies are utilized.

We also assessed whether restavèk children differ from non-restaveks in the poorest quintile by restricting the comparison group to only children from the poorest quintile. All tests were performed at 0.05 significance level. All analyses were conducted with SAS version 9.3 (Cary, NC).

## Results

### *Characteristics of children in the Haiti 2012's DHS*

Overall a weighted sample of 13,907 children was used for this analysis. Of those, 245 (1.8%) children were identified as restavèks (Table 1). From among all children, 51.0% were male; 1.3% were orphans. Nearly half (45.4%) lived in a poor family, and 64.3% lived in rural area. Most (92.5%) were currently enrolled in school, 16.4% of them have experienced physical abuse; 26.0% engage in a high level of labor, and 68.3% have experienced hunger in the month prior to the interviews.

### *Restavèks compared to all children*

In bivariate analysis, restavèk children were twice as likely to be female compared to other non-restavèk children (65.2% vs. 48.7%,  $p < 0.0001$ ) (Table 2). Also as expected, restavèk children were less likely to be living in rural area (53.4% vs. 64.5%,  $p = 0.0046$ ), less likely to be living in a poor family (27.1% vs. 45.8%,  $p < 0.0001$ ), and less likely to live in a family with large number of children (median 4.6 vs. 5.9,  $p < 0.0001$ ). Restavèk children were also less likely to be currently enrolled in school (79.3% vs. 92.7%,  $p < 0.0001$ ). They were less likely to have experience physical abuse (8.6% vs. 16.6%,  $p = 0.0066$ ) as compared to all other children. Restavèk children were more likely to have had medium (45.4% vs. 37.4%) or high (34.8% vs. 25.8%) levels of domestic work. They were less likely to have experienced hunger in the past month (53.1% vs. 68.5%,  $p < 0.0001$ ).

In multivariate analysis, those results did not change substantially. After adjusting for sex, age, parent living status, family size, location, and wealth index, restavèk children, as compared to all non-restavèk children, were less likely to be enrolled in school (aOR 0.16, 95%CI 0.10, 0.26); to experience physical abuse (aOR 0.41, 95%CI 0.24, 0.70); or to have experienced hunger (aOR 0.56, 95%CI 0.39, 0.80). They were more likely to have engaged in medium or high level of domestic work (aOR 2.14, 95%CI 1.31, 3.52 and aOR 2.85, 95%CI 1.71, 4.76, respectively).

**Table 2**

Comparison between restavèk children and all children 5–14 years in Haiti's 2012 demographic and health survey.

	Restavèk (n = 245*) (%)		Non-restavèk (n = 13,661) (%)		OR (95%CI)		Adjusted OR (95%CI)	
<b>Sex of child</b>								
Female	160	(65.2)	6,650	(48.7)	1.97	(1.39, 2.81)	<b>1.74</b>	<b>(1.20, 2.53)</b>
Male	85	(34.8)	7,011	(51.3)				
<b>Location</b>								
Urban	114	(46.5)	4,852	(35.5)	0.63	(0.46, 0.87)	1.55	(0.99, 2.42)
Rural	131	(53.4)	8,809	(64.5)				
<b>Parents alive</b>								
Both	157	(65.7)	11,845	(87.1)	Ref.		Ref.	
One	67	(28.1)	1,580	(11.6)	3.20	(2.18, 4.70)	<b>2.33</b>	<b>(1.55, 3.52)</b>
Orphan	15	(6.2)	171	(1.3)	6.51	(3.67, 11.54)	<b>4.08</b>	<b>(2.13, 7.83)</b>
<b>Wealth index</b>								
Poor	67	(27.1)	6,254	(45.8)	Ref.		Ref.	
Middle	39	(15.8)	2,822	(20.7)	1.30	(0.79, 2.14)	1.64	(0.93, 2.90)
Rich	140	(57.0)	4,586	(33.6)	2.87	(2.01, 4.10)	<b>5.25</b>	<b>(3.07, 8.96)</b>
<b>Education</b>								
Currently enrolled	194	(79.3)	12,660	(92.7)	0.30	(0.20, 0.45)	<b>0.16</b>	<b>(0.10, 0.26)</b>
Not currently enrolled	51	(20.7)	994	(7.3)				
<b>Physical abuse</b>								
Some	21	(8.6)	2,253	(16.6)	0.47	(0.27, 0.82)	<b>0.41</b>	<b>(0.24, 0.70)</b>
None	224	(91.4)	11,352	(83.4)				
<b>Child labor</b>								
Low	48	(19.7)	4,958	(36.7)	Ref.		Ref.	
Medium	111	(45.4)	5,060	(37.4)	2.26	(1.45, 3.52)	<b>2.14</b>	<b>(1.31, 3.52)</b>
High	85	(34.8)	3,495	(25.8)	2.50	(1.56, 4.00)	<b>2.85</b>	<b>(1.71, 4.76)</b>
<b>Hunger</b>								
Yes	130	(53.1)	9,361	(68.5)	0.52	(0.38, 0.72)	<b>0.56</b>	<b>(0.39, 0.80)</b>
No	115	(46.9)	4,296	(31.5)				
<b>Age in years: median (IQR)</b>	11.4	(9.9, 12.6)	8.8	(6.5, 11.3)	1.32	(1.25, 1.40)	<b>1.26</b>	<b>(1.19, 1.34)</b>
<b>Family size: median (IQR)</b>	4.6	(3.5, 6.4)	5.9	(4.6, 7.6)	0.86	(0.80, 0.93)	<b>0.86</b>	<b>(0.80, 0.93)</b>

Adjusted odd ratios (OR) were obtained by fitting a logistic model with restavèk as outcome and all the variables in the table as covariates. IQR is the interquartile range, also known as the middle 50%.

\* Weight frequencies are utilized.

A sensitivity analysis, stratifying the models by gender, did not change the results. Among females, comparing restavèk to non-restavèk children, the adjusted odds of being enrolled in school, experiencing physical abuse, engaging in medium or high level of domestic work, or experiencing hunger were similar to the odds in the combined-gender analysis. Likewise, among males, comparing restavèk to non-restavèk children, the adjusted odds of being enrolled in school, experiencing physical abuse, engaging in medium or high level of domestic work, or experiencing hunger were similar to the odds in the combined-gender analysis. The gender-stratified models demonstrated no statistically significant differences between females and males (data not shown).

#### *Restavèks compared to children in the poorest quintile*

After restricting the comparison group to non-restavèk children in the poorest quintile, there was no statistical difference between restavèk children and the poorest children's school enrollment (79.3% vs. 85.0%,  $p = 0.057$ ), or experiences with physical abuse (8.6% vs. 13.5%,  $p = 0.07$ ) (Table 3). Restavèk children remained less likely to have experienced hunger in the past month (53.1% vs. 74.6%,  $p \leq 0.0001$ ), and to live in a family with large number of children (median 4.6 vs. 5.9,  $p \leq 0.0001$ ) compared to their peers in the poorest quintile in bivariate analysis.

However, after controlling for sex, age, parent living status, family size, location, and wealth index, compared to non-restavèk children in the poorest quintile, restavèk children remained at a statistically significantly lower odds of being currently enrolled in school (aOR 0.35, 95%CI 0.19, 0.65) and to experience hunger (aOR 0.39, 95%CI 0.28, 0.65). But, as in bivariate analyses, there were no differences between restavèk children and the poorest non-restavèk children for experiencing physical abuse (aOR 0.70, 95%CI 0.31, 1.55) or the amount of labor (aOR 1.23, 95%CI 0.51, 2.95 and aOR 1.17, 95%CI 0.50, 2.76, for medium and high levels, respectively).

#### **Discussion**

Our findings complicate a simplistic explanation and condemnation of the restavèk system. While the suggested potentially exploitative and non-voluntary nature of the system means that restavèk children are at risk for mistreatment, our findings demonstrate that the restavèk system remains active in Haiti because poor families lack basic resources to support their children. Restavèk children are different from non-restavèk children in ways that are, in turn, detrimental and beneficial

**Table 3**  
Comparison between restavèk children and children 5–14 years in the poorest quintile of wealth in Haiti's 2012 demographic and health survey.

	Restavèk (n = 245 <sup>*</sup> ) (%)		Poorest children (n = 3,303 <sup>*</sup> ) (%)		OR (95%CI)		Adjusted OR (95%CI)	
<b>Sex of child</b>								
Female	160	(65.2)	1,536	(46.5)	2.16	(1.51, 3.08)	<b>1.75</b>	<b>(1.06, 2.89)</b>
Male	85	(34.8)	1,768	(53.5)				
<b>Location</b>								
Urban	114	(46.5)	0	(0.0)				
Rural	131	(53.4)	3,303	(100.0)				
<b>Parents alive</b>								
Both	157	(65.7)	2,922	(88.7)	Ref.		Ref.	
One	67	(28.1)	351	(10.7)	3.55	(2.39, 5.28)	<b>4.20</b>	<b>(2.38, 7.41)</b>
Orphan	15	(6.2)	20	(0.6)	13.64	(6.87, 27.06)	<b>11.64</b>	<b>(4.63, 29.30)</b>
<b>Education</b>								
Currently enrolled	194	(79.3)	2,808	(85.0)	0.67	(0.45, 1.01)	<b>0.35</b>	<b>(0.19, 0.65)</b>
Not currently enrolled	51	(20.7)	494	(15.0)				
<b>Physical abuse</b>								
Some	21	(8.6)	443	(13.5)	0.60	(0.34, 1.05)	0.70	(0.31, 1.55)
None	224	(91.4)	2,843	(86.5)				
<b>Child labor</b>								
Low	48	(19.7)	760	(23.2)	Ref.		Ref.	
Medium	111	(45.4)	1,248	(38.1)	1.40	(0.89, 2.20)	1.23	(0.51, 2.95)
High	85	(34.8)	1,266	(38.7)	1.06	(0.67, 1.71)	1.17	(0.50, 2.76)
<b>Hunger</b>								
Yes	130	(53.1)	2,464	(74.6)	0.39	(0.28, 0.54)	<b>0.39</b>	<b>(0.24, 0.65)</b>
No	115	(46.9)	838	(25.4)				
<b>Age in years: median (IQR)</b>	11.4	(9.9, 12.6)	8.8	(6.5, 11.3)	1.37	(1.29, 1.46)	<b>1.29</b>	<b>(1.19, 1.40)</b>
<b>Family size: median (IQR)</b>	4.6	(3.5, 6.4)	5.9	(4.6, 7.6)	0.79	(0.72, 0.86)	<b>0.86</b>	<b>(0.77, 0.96)</b>

Adjusted odd ratios (OR) were obtained by fitting a logistic model with restavèk as outcome and all the variables in the table as covariates. IQR is the interquartile range, also known as the middle 50%.

\* Weight frequencies are utilized.

to their well-being. On one hand, restavèk children have decreased access to school as compared to all Haitian children and as compared to the poorest Haitian children. Restavèk children have more labor responsibilities as compared to all Haitian children. On the other hand, restavèk children experience less physical abuse than all Haitian children, and less hunger, as compared to both all and poorest non-restavèk children. Our key findings are that most Haitian children have compromised well-being: Haitian children experience high levels of abuse, high levels of domestic work, and high levels of hunger.

We found much higher rates of school attendance than other studies from Haiti; UNICEF reports only 77% of children attending primary school (UNICEF, 2013). We acknowledge that our measure of education is imprecise: describing children as “currently attending” if enrolled at any time during the past year likely leads to misclassification with children being counted as having access to school when in fact they do not. Additionally, the measure does not distinguish whether children are attending an accredited school with licensed teachers or not. Furthermore, other scholars have determined that among the children who do attend school, over three quarters are more than two years older than their expected age for grade level, due to late enrollment and high repetition rates; (Gönsch, 2011) our measures do not capture that delay. In sum, our data demonstrate that unfortunately restavèk children experience less access to school, even when compared to their poorer non-restavèk counterparts, despite the fact that it is theorized parents sent children to be restavèks in order for them to have increased chances for education (Cooper et al., 2012).

Our finding that many Haitian children experience physical violence is in concordance with findings from Pierre and others, who report high levels of exposure to sexual and physical violence, particularly among vulnerable children (Pierre et al., 2009; Shahinian, 2009). However, our data do not bear up the assumption that restavèk children, in a potentially exploitative situation, experience more physical violence. In fact, they appear to experience less physical violence. While our measure of physical violence may be an underestimate, given that adults may misreport perpetrating violence, we would expect this misreporting to be either non-differential between restavèk and non-restavèk children, or if differential, that people would admit to abusing a restavèk more openly than abusing a biological child, making our estimates conservative. Nonetheless, it is important to note that the physical abuse was only asked of one responding adult. Other adults, or non-restavèk children in the household, might perpetrate violence against a restavèk child, and that violence might not be reported by the responding adult. Finally, our measure of violence includes only physical violence, not sexual violence. Though we did not find any differences in wellbeing indicators by gender among restavèk children, girls might be more at risk for sexual violence than boys.

While most children (64%) in this survey perform a medium or high level of labor, restavèk children do significantly more labor than their poor non-restavèk counterparts. Our measure for labor likely represents an underestimate, because it only takes into account domestic labor. While most child labor in Haiti is unpaid domestic work, other forms of child labor include agricultural work, petty commerce, and sex work (Smucker & Murray, 2004). These types of child labor exist globally, with the root cause being poverty (Thorsen, 2012).

Finally, while the majority of restavèk children experience hunger, they are significantly less likely to experience hunger than all non-restavèk children, and restavèk children are more than two and half times less likely to experience hunger than poor non-restavèk children. However, hunger was not assessed via a standard food insecurity questionnaire and may be imprecise. While the hunger variable is subject to misclassification, we expect any misclassification to be non-differential. Other scholars have documented temporary placement of children as restavèks during hunger season or periods of food shortage; hunger may be one of the main catalysts for the restavèk system (Smucker & Murray, 2004).

Given the cross-sectional nature of this study, we can assess the association between restavèk status and the outcomes, but we cannot determine a causal relationship. Some restavèks may have been misclassified as non-restavèks, if the adults in the household were reluctant to admit to this somewhat stigmatized situation. Likewise, Haitian household composition is complex, with kin relationships being flexible and negotiated, and a single cross-sectional assessment cannot capture this dynamism.

We note that the effect of the massive Haitian earthquake in 2010 on the restavèk system has not been closely examined. Some speculate that because the earthquake increased vulnerability of Haitian children, it may have resulted in an increase in the prevalence of restavèks. However, the DHS data indicate otherwise. In the 2012 DHS data, 1.8% of children 5–15 years old were restavèks, a slight decrease from the 2.8% prevalence measured in the 2006 DHS.

As the first study comparing restavèks to non-restavèk children in Haiti, utilizing data from a large, nationally representative, and demographically heterogeneous sample, our findings represent an important contribution to our understanding of restavèk children. Longitudinal studies will be necessary to determine if restavèk status is causally linked to the wellbeing factors we examined, and to determine how these factors influence the development of restavèk children.

The surprising finding that restavèk children are better off in some respects than their non-restavèk peers highlights the desperate poverty in Haiti and suggests that structural changes for poverty reduction will be required before the restavèk system will end. At the broader structural level, national free education would permit more families to let their children attain their educational goals while living at home. High levels of hunger among children in Haiti point to a need for reducing poverty in Haiti, particularly with respect to financial stability and job opportunities in rural areas.

## Contributions

K. Haydocy conceived of the study, led the analysis, and participated in the writing. M. Yotebieng contributed to conceptualization, analysis, and writing. A. Norris supervised and contributed to the conceptualization, the analysis and the writing.

## References

- Ampaabeng, S., & Tan, C. M. (2013). The long-term cognitive consequences of early childhood malnutrition: the case of famine in Ghana. *Journal of Health Economics*, 32(6), 1013–1027.
- Campbell, F. A., Pungelio, E. P., Miller-Johnson, S., Buchinal, M., & Ramey, C. (2001). The development of cognitive and academic abilities: Growth curves from an early childhood educational experiment. *Developmental Psychology*, 1(37), 231–290.
- Cayemittes, Michel, Busangu, Michelle Fatuma, de Dieu Bizimana, Jean, Barrère, Bernard, Sèvere, Blaise, Cayemittes, Viviane, et al. (2013). *Enquête Mortalité, Morbidité et Utilisation des Services, Haïti, 2012*. Calverton, MD: MSPP, IHE and ICF, International DHS Methodology. Available at (<http://dhsprogram.com/What-We-Do/Methodology.cfm>).
- Cooper, A., Diego-Rosell, P., & Gogue, C. (2012). *Child labor in domestic service (restaveks) in Port-au-Prince*. Haiti: United States Department of Labor.
- Gönsch, I. (2011). *Determinants of primary school enrollment in Haiti and the Dominican Republic*. Germany: ZEU Publications.
- Heim, C., Shugart, M., Craighead, W. E., & Nemeroff, C. B. (2010). Neurobiological and psychiatric consequences of child abuse and neglect. *Developmental Psychology*, 52(7), 671–690.
- Huebler, F. (2008). *Child labour and school attendance: Evidence from MICS and DHS surveys*. UNICEF.
- Isiugo-Abanihe, U. (1985). Child fosterage in West Africa. *Population and Development Review*, (6), 53–57.
- Klocker, N. (2011). Negotiating change: Working with children and their employers to transform child domestic work in Iringa, Tanzania. *Children's Geographies*, 9(2), 205–220.
- Leeds, I. L., Engel, P. M., Derby, K. S., Kapadia, S. M., Chery, M. P., & Bhatt, A. (2010). Case report: Two cases of restavèk-related illness: clinical implications of foster neglect in Haiti. *American Journal of Tropical Medicine and Hygiene*, 83(5), 1098.
- McLoyd, V., & Wilson, L. (1990). Maternal behavior, social support, and economic conditions as predictors of distress in children. *New Directions for Child and Adolescent Development*, 46, 49–69.
- Pierre, Y., Smucker, G. R., & Tardieu, J. (2009). *Lost childhoods in Haiti: Quantifying child trafficking, restaveks, and victims of violence*. US Agency for International Development: Pan American Development Foundation and Port-au-Prince (Haiti).
- Restavèk Freedom. (2011). *Universal periodic review restavèk report: The persistence of child labor and slavery*. Haiti: Institute for Justice and Democracy.
- Rothman, K. J. (2012). *Epidemiology—An introduction*. New York, NY: Oxford University Press.
- Shahinian, G. (2009). *Report of the Rapporteur on contemporary forms of slavery, including its causes and consequences: mission to Haiti*. United Nations.
- Smucker, G. R., & Murray, G. F. (2004). *The uses of children: Study of trafficking in Haitian children*. USAID.
- Spencer, N. (2000). *Poverty and child health*. Radcliffe Medical Center.
- The World Bank. (2013). *Haiti*. The World Bank. Available at (<http://data.worldbank.org/country/haiti>).
- Thorsen, D. (2012). *Child domestic workers: Evidence from west and central Africa*. UNICEF.
- UNICEF. (2013). *At a glance: Haiti*. Available at: ([http://www.unicef.org/infobycountry/haiti\\_statistics.html](http://www.unicef.org/infobycountry/haiti_statistics.html)).
- United Nations Human Rights. Office of the High Commissioner for Human Rights. (1956). *Supplementary convention on the abolition of slavery, the slave trade, and instructions and practices similar to slavery*. Geneva, 7 September 1956. Available at <http://www.ohchr.org/EN/ProfessionalInterest/Pages/SupplementaryConventionAbolitionOfSlavery.aspx>