

Comparing Mothers and Daughters in DHS Surveys

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1. Introduction and Purpose

- a. The Demographic and Health Surveys interview individual women between the ages of 15 and 49 years (the reproductive ages). Those interviews include information on women's backgrounds, reproduction, attitudes, health, and other topics, including information about sibling survival. Included in the sections on reproduction are summary measures of fertility, fertility desires, use of family planning methods, a complete birth history and a reproductive calendar. If there is more than one woman in the household then each one is interviewed. In a number of cases, mothers and daughters are interviewed if they are living in the same household. These interviews can be paired to obtain additional information than would be the case if only each interview was used as a research unit. It is the purpose of this paper to explore some of the analytical possibilities of using mother-daughter pairs from the DHS dataⁱ.

2. Research Questions

- a. There are several types of analysis that may benefit from examining mother-daughter pairs: Methodologically, certain aspects of reporting issues may be studied, such as age and birthdate, education, fertility and child mortality. Substantively, the impact of birth characteristics, maternal background and maternal behavior and attitudes may affect daughters' education, reproduction, attitudes, and health. Some examples of each are:
 - i. Reporting issues
 1. How well do mothers report their daughters' ages and birthdates?
 2. How well do mothers report their daughters' educational attainment?
 3. Do the sibling histories collected from the daughters match the mothers' reporting of their children, total and surviving? Do mothers "forget" some of their children (e.g. hide children who died early in life or were born to another father)?
 4. If daughters declare fewer siblings, is this due to early child deaths, especially those who were born before the daughter or when the daughter was young, or were born to another father?
 - ii. Substantive research themes:
 1. Do birth characteristics, such as birth interval, order, and the mother's age at birth (obtained from the mother's birth history)

affect the daughter's educational attainment, height, body mass index, anemia and blood pressure?

2. How alike are mothers and daughters?
 - a. How does the mother's educational attainment affect that of her daughter?
 - b. Has there been a change in height between mothers and daughters?
 - c. Do mothers' reproductive behavior and attitudes affect the daughters' reproductive attitudes, such as ideal number of children and son preference?

3. Data and Methodology

- a. Since its beginning in 1984, the DHS project has completed 232 DHS-type surveys and 117 have sibling histories. The likelihood that both mother and daughter are interviewed in the same household depends on the age and marital status of daughters since older and married daughters are more likely to live in a different household from their mothers and also depends on the mother's children ever born and age at birth as women who have children at older ages will not have a daughter who is old enough to be interviewed.

To obtain the mother-daughter pairs, the following matching criteria were used: The line number in the roster of household members was obtained for each living daughter between the ages of 15 and 49 years in the mother's birth history. If the identified daughter was eligible for individual interview, then her interview was attached to the mother's interview using a second copy of the individual interview survey dataset with a change in variable number by adding a "d" in front (i.e. v013- for mother's age and dv013 for daughter's age). This matching was done for 101 surveys that had a household line number variable for children in the birth history.ⁱⁱ In all there were 167, 973 mother-daughter pairs of interviews, representing 4.6% of the total of 3,680,426 completed interviews. Sixteen surveys were of ever-married women therefore limiting the number of mother-daughter combinations to 1.1% of interviews. The 85 all women surveys in contrast had 5.4% of interviews were of mother and daughters in the same household. Fifty-seven of the 85 surveys had a sibling history, allowing for comparison of with the mother's birth history. For the all women surveys, the percentage of mother-daughter pairs ranges from a high of around 13% in the Armenia 2005 and 2010 surveys to 1.7% in Mali 2001. For the ever-married surveys, the percentages vary between 3.4% in the Maldives 2009 to 0.2% in Jordan 2002. See Table 1.

4. Results

To illustrate the analyses that can be done for reporting issues and for substantive areas, four DHS surveys were chosen: Benin 2006, Cambodia 2010, Kenya 2008-09, and Peru 2004-08.

a. Daughter's Age

Given that matching was done without reference to birthdates, data quality can be examined by comparing reports between the daughter and the mother about the daughter's age in years at the time of the interview. In the four selected surveys, mothers and daughters differ on the daughter's age between 4.5% (Peru) and 11.3% (Benin) in the mother-daughter pairs (Figure 1). While many of these differences are by one year, some are up to four or more years different (Table 2).

b. Number of children of mother and siblings of daughter.

In DHS surveys intended to measure maternal mortality, a sibling history is asked where respondents provide a list of all siblings born to the respondent's mother. Additionally the information on each sibling's survival status, birthdate, and death date and age is obtained for dead siblings, as well as other information to calculate maternal mortality rates and ratios. Since the respondent's sibling history is equivalent to the respondent's mother's birth history, comparison can be made for mother-daughter pairs as a check on the quality of reporting. Figure 2 shows that the discrepancies in reporting the total sibship sizes vary from 10.6 percent of mother-daughter pairs in Kenya to 3.9% in Peru. In all four of the surveys where there was a discrepancy, it was more often that mothers reported more children. It may be the case where a daughter's brother or sister had died at a young age before the daughter's birth or when the daughter was young so that she was unaware that she had that brother or sister. In other cases, the missing sibling may have been born before the daughter and be living with a different father or have been given up for adoption.

Figure 3 compares the reported number of dead siblings. Where there is a difference in reporting of dead siblings, more mothers report a higher number than do daughters, by about 7% of respondent pairs in Kenya and Benin. However, in some cases daughters report more dead siblings than mothers, up to 2.0 percent in Benin, indicating omission from the birth history and possibly impacting estimates of infant and child mortality.

To investigate whether daughters are less likely to report dead siblings when the sibling died when the daughter was young or before the daughter's birth or when the sibling died at a young age or a combination of the two, Table 3 was produced. The total row from this table shows that where mothers report more child deaths

than daughters, about a third of those that were missed occurred before the daughter was born.

Figure 4 compares the reporting of living siblings between mothers and daughters. As expected, the percentage of discrepancies in reporting of living siblings is less than that for dead siblings, reaching 5.3 percent in Benin. There is about an even split between whether the mother or the daughter report more living siblings. It is difficult to understand the reason for these discrepancies but they may have something to do with adoptions out (where the mother says more) and adoptions in (where the daughter says more). Indeed, almost 14 percent of children under age 18 in Benin were living without one or both their parentsⁱⁱⁱ. However, both the birth history and the sibling history should not all and only children born to the daughter's mother so that there is misreporting by the mother and/or the daughter. Indeed, Peru, with 1.1 percent of discrepant pairs, has about 9 percent of children without one or both parent^{iv}, indicating that more accurate reporting is possible.

c. Daughters' versus Mothers' Education

Mothers' and daughters' levels of education are compared in Figures 5 to 8. In general daughters have more education than their mothers, as may be expected. However, this tendency depends on which country one is studying. In Benin, many mothers with no education also have daughters with no education, and even some mothers with secondary education have daughters with no education. Other countries fare better: in Cambodia and Peru, almost all mothers with some education have most daughters with secondary or higher education. In Kenya, most mothers with primary education have daughters with primary education but very few have daughters without education.

d. Daughters' versus Mothers' Height

In surveys with anthropometry of respondents, the heights of mothers and daughters can be compared to see if there have been changes over generations. Table 4 compares the heights by subtracting the mother's height from the daughter's height. Since girls under 20 years of age may still be growing, the comparison is done by five year age group of the daughter. In three of the countries, Benin, Cambodia, and Kenya, daughters 15-19 years of age are between 1 and 3.3 cm. shorter than their mothers. Peru is the only country among the four where daughters are taller than their mothers in all the age groups, up to 1.9 cm taller for daughters 20-24 years. In Cambodia, daughters are very close to their mothers in height for ages 20-24 and 25-29. The lack of increase in height in Benin, Cambodia, and Kenya may result from a deterioration of food availability or feeding practices during the early childhood or adolescence when compared with their mothers. Further research needs to be done to explain this unexpected trend in these three countries.

e. Daughters' Ideal Family Sizes and Mothers' Children

The size of the family in which women grow up may affect their fertility desires. The mother-daughter interview pairs can shed light on how daughters preferences for number of children and number of boys and girls is related to their own experience as children. Figures 9 to 12 show the relationship between the mother's number of living children at the time of the survey and the daughter's ideal number of children, of boys and of girls^v. In Benin (Figure 9), the daughter's ideal number of children, boys and girls increases with the number of living siblings of the daughter after three. Kenya also shows this pattern but after four living children (Figure 11). There is a small increase for Cambodia, after 4 living siblings (Figure 10) but little increase in Peru until 8 living siblings.

With regard to sex preference, there is little difference between the ideal number of boys and girls in Benin and Kenya but Cambodia and Peru have a preference for girls. This preference does not appear to be highly related to the number of living siblings, however.

f. Effect of Mothers' Fertility Behavior on Daughters

Mother's fertility behavior may affect their daughter's status and outcomes. This illustrative paper will focus on three aspects of the mother's fertility behavior in relation to her daughter: the interval between the daughter's birth and the birth of daughter's next older sibling (dead or alive), the daughter's order at birth, and the mother's age at the time of the daughter's birth. Two biological effects, height and body mass index (BMI), and the daughter's level of education will be examined.

i. Height

For Benin and Kenya, the duration of the preceding birth interval is positively associated with daughter's height (Figure 13), and height increases in Peru for intervals of 48 months or longer. Cambodia shows an irregular pattern with height of daughters being highest for intervals of 36 to 47 months.

Height decreases with birth order in Peru and Cambodia (Figure 14) but increases in Kenya up to order group 5-6 and then decreases for 7+. In Benin it increases between 1st-2nd order to 3rd-4th order but decreases thereafter.

The pattern for daughter's height by mother's age at her birth is irregular in all four surveys (Figure 15), indicating a lack of a strong relationship.

ii. BMI

The body mass index (BMI) is calculated as weight in kilograms divided by the square of height in centimeters and is used to evaluate nutritional status, primarily of adults. Values below 18.5 are considered as undernourished,

while values of 25.0 and above are considered as overweight or obese (30.0 and above).

The relationships between low BMI values of less than 18.5 with the daughter's preceding birth interval, her birth order, and her mother's age at her birth are shown in Figures 16, 17, and 18, respectively. Low BMI values decrease with increasing preceding birth interval in Cambodia, increase slightly in Peru, and have irregular patterns in Benin and Kenya (Figure 16). Low BMI appears to be unrelated to birth order, except for a large increase in the percentage with low BMI for birth order 6 in Cambodia (Figure 17)^{vi}. Similarly, low BMI is not very related to mother's age at birth (Figure 18). Peru does show a small increase with increasing age at birth, and Benin, Cambodia, and Kenya show small u-shaped patterns.

The patterns of high BMI with preceding birth interval are quite irregular in Benin, Kenya and Peru. Cambodia does not show a relationship between high BMI and preceding birth interval (Figure 19). The percentage of daughters with high BMI trends downward irregularly with birth order in Peru and Cambodia but the patterns for Benin and Kenya do not show an interpretable pattern even though high BMI varies substantially with birth order (Figure 20). With increasing mother's age at birth, the percentage of daughters with high BMI decreases in Peru and Cambodia. Again Benin and Kenya have irregular patterns (Figure 21).

iii. Education

To measure educational attainment of daughters as affected by the mother's fertility behavior, the mean number of years of education for daughters 20 years and above is used as the indicator. This restriction was done because daughters under age 20 may still be attending secondary school and thus has their number of years of education censored by the interview. Additionally, daughters with more than 12 years of education were coded as 12 years since those age 20 and over may be attending institutions of higher education.

Table 5 shows the relationships between daughters' mean years of education and preceding birth interval, birth order, and mother's age at her birth. Peru has slightly increasing years of education with increasing birth interval and slightly decreasing years of education with increasing birth order. The other countries show no clear patterns with birth interval and order. However, all countries have large increases in years of education with increasing mother's age at birth (Figure 22). Without multivariate analysis to control for confounding factors, such as mother's education, level of wealth, and type of residence, the effect of mother's age at birth on

daughter's education cannot be confirmed. Such multivariate analysis is beyond the scope of this paper.

5. Discussion

This paper is an exploratory investigation into the usefulness of exploiting an unusual data source within the Demographic and Health Surveys: pairs of interviews in households where both a mother and a daughter were individually interviewed. The number of such pairs is sufficient for analysis in most DHS surveys, ranging up to 13 percent of individual interviews, fewer in surveys where only ever-married women were interviewed. The mother-daughter pairs are not representative of all daughters age 15-49 of women 15-49 since both have to have slept in the household the night before the survey. Therefore, daughters tend to be younger and mothers older than women 15-49 and are more likely to be single. The matching was done through the identification of the household schedule line number that is included as part of the birth history. While it is expected that this matching is well done since it occurs during the interview and in the same household, a few wrong line numbers may have been recorded. Possible ways to sift for wrong line numbers could be comparing the sex of the child in the birth history with the sex of the person in the household schedule and to compare the relationship to the household head with that expected as a child of the respondent. However, these checks were not performed and the latter is not unambiguous depending on the mother's relationship with the head of household and is also subject to misreporting or misrecording.

DHS surveys from four countries have been selected to demonstrate the usefulness of using this data set of mother-daughter pairs in ascertaining quality of reporting has been demonstrated by comparing the mother's and daughter's report of the daughter's age and comparing the number of the mother's children ever born with the daughter's sibship size in surveys where a sibling history has been collected. It was desired to spread the four surveys among the world regions, one from Latin America, two from Africa (West and East), and one from Southeast Asia. While the latest survey of India included never-married women, it did not have a sibling history and so was not chosen as an illustrative survey.

The comparison of age reporting shows that most mothers and daughters agree on the daughters age but a substantial portion disagree, more so among the African surveys. Agreement on age is to be expected as both may be present at the other's interview or provide information to each other. It is interesting that more daughters say that they are older than their mother says in Benin but the opposite is true in Kenya. No explanation of this difference comes to mind, however. The very few far outliers could be pair mismatches.

As long as the daughter in the pair is one of the mother's children, even with a mismatched line number, the children ever born to the mother should match the number of the daughters siblings (plus herself) obtained in the sibling history. In all the surveys studied here, mothers report more children. Part of this difference is due to the daughters not

reporting siblings who died before the daughter's birth and were possibly not informed of these siblings. On the other hand, there are daughters who report more siblings than their mother reports children. This difference is likely to be due to omission by the mother as the discrepancies are mainly for the number of dead children. In some of the mother-daughter pairs, there are differences in the number of living children reported. Where the daughters report more living siblings, official and unofficial adopted-in children may have been counted as brothers and sisters. Where the mothers report more living children, adopted-out children may have been omitted by the daughter, perhaps due to lack of knowledge.

Beyond differential reporting used to evaluate data quality, the mother-daughter pairs can also be used to add information for the study of outcome indicators and for studying intergenerational effects and changes. To illustrate the possibilities of using the additional data provided from mother-daughter pairings, the daughter's birth characteristics of preceding birth interval, birth order, and mother's age at birth have been added from information in the mother's birth history. It is speculated that the mother's fertility behavior may impact a child's biological and sociological characteristics later in life. The analyses here show that this is probably true at least for some countries for the daughters' height, BMI, and educational attainment. However, in most cases the relationships are not very strong, the exception being educational attainment and mother's age at birth.

Intergenerational change in height has surprising results as daughters on average are shorter than their mothers in the two African surveys. Only Peru shows the expected increase in height between generations. Further investigation into historical feeding patterns, availability of food and disease prevalence may provide explanations for the lack of increase in height.

The intergenerational change in level of education is in the expected direction, increasing in all four surveys between mothers and daughters. However, the amount of increase varies substantially between countries, with the African countries lagging. The slow expansion of schooling to rural areas and high percentage of the population that is rural may be partial explanations of these lags.

In three of the four surveys, the daughter's ideal number of children increases with the number of the mother's living children, the exception being Peru where there is little relationship. The difference in relationship may be due to a higher level of development and of availability and acceptability of family planning in Peru than in the other countries, especially Benin and Kenya. Intergenerational and temporal changes may also be factors, especially in relation to large scale migratory movements from rural to urban areas, as occurred to the mother's generation in Peru.

6. Conclusion and Further Research

Extracting “new” data from the DHS surveys is one of way of data mining. This paper presented a way of thinking beyond the usual boundaries for analyzing DHS data sets and is aimed at inspiring others to look beyond those boundaries as well. Mother-daughter pairings of interviews may be useful for studying several different kinds of issues from data quality and reporting to the long-term impact of birth characteristics and to intergenerational changes. As an example not investigated here is the question: How do mothers’ attitudes towards domestic violence affect their daughters’ attitudes and experience?

These illustrative analyses can be extended in several ways: by pooling the large number of mother-daughter pairs in the various DHS surveys, using multivariate analysis to control for confounding factors and to study the pathways of relationships, and to add father-daughter, mother-son pairings where male surveys have been undertaken.

ⁱ This analysis was inspired by an observation by an interviewer from the Peru Continuous Demographic and Health Survey (ENDES Continua), where a daughter being interviewed reported a dead sibling that her mother had not reported in the birth history portion of the mother’s interview. The interviewer asked the mother about this child and was told that the child died due to the mother’s inattention and that the mother was embarrassed to tell the interviewer about it.

ⁱⁱ Note that surveys without a child’s household line number could also be matched using child’s age, sex, and relationship to head of household but that the matching would be somewhat more error prone.

ⁱⁱⁱ Institut National de la Statistique et de l’Analyse Économique (INSAE) [Bénin] et Macro International Inc. 2007 : *Enquête Démographique et de Santé (EDSB-III) - Bénin 2006*. Calverton, Maryland, USA : Institut National de la Statistique et de l’Analyse Économique et Macro International Inc.

^{iv} Instituto Nacional de Estadística e Informática (INEI) [Peru] et Macro International Inc. 2007 : *Encuesta Demográfica y de Salud Familiar (ENDES): Informe Principal -Peru 2007-2008*. Lima, Perú.

^v In DHS surveys, the ideal number of children comes from a question about how many children (boys, girls) a woman would prefer to have if she could go back to a time when she had no children. Many of the daughters here have not had any children yet or are early in their fertility careers and so could be less influenced in responding than would women who have already progressed in fertility careers.

^{vi} Birth orders with few cases (less than 50) are not shown on the graphs for both low BMI and high BMI.

Table 1.
Mother-daughter pairs of interviews

Survey	Year	Ever-Married Sample	Sibling history	Mother-Daughter Pairs	Women Respondents	M-D pairs as percent of women respondents
Albania	2008-09			1,533	12,766	12.0
Armenia	2000			1,339	11,286	11.9
Armenia	2005			1,367	10,297	13.3
Armenia	2010			1,083	8,424	12.9
Azerbaijan	2006			1,520	13,565	11.2
Bangladesh	2004	Y		675	33,605	2.0
Bangladesh	2007	Y		630	30,527	2.1
Bangladesh	2011	Y		997	45,844	2.2
Benin	2001			534	19,398	2.8
Benin	2006		Y	1,488	57,232	2.6
Bolivia	2003		Y	2,727	45,116	6.0
Bolivia	2008		Y	2,427	40,355	6.0
Burkina Faso	2003			1,136	41,520	2.7
Burkina Faso	2010		Y	1,452	56,178	2.6
Burundi	2010		Y	1,220	24,520	5.0
Cambodia	2000		Y	2,729	40,990	6.7
Cambodia	2005		Y	2,891	40,457	7.1
Cambodia	2010		Y	3,092	37,511	8.2
Cameroon	2004		Y	1,166	29,455	4.0
Cameroon	2011		Y	1,718	42,312	4.1
Colombia	2000			1,895	21,267	8.9
Colombia	2005			6,387	71,278	9.0
Colombia	2010			8,279	91,399	9.1
Congo (Brazzaville)	2005		Y	757	16,687	4.5
Congo DR	2007		Y	1,134	29,548	3.8
Dominican Republic	2002		Y	3,261	53,667	6.1
Dominican Republic	2007		Y	4,078	58,037	7.0
Egypt	2000	Y		269	54,780	0.5
Egypt	2003	Y		193	30,298	0.6
Egypt	2005	Y		373	61,455	0.6
Egypt	2008	Y		278	48,619	0.6
Ethiopia	2000			2,013	44,174	4.6
Ethiopia	2005		Y	1,733	39,881	4.3
Ethiopia	2011		Y	1,996	45,540	4.4
Gabon	2012		Y	1,072	23,109	4.6
Ghana	2003			607	15,086	4.0
Ghana	2008			559	11,888	4.7
Guinea	2005		Y	736	27,115	2.7
Guyana	2009			905	10,929	8.3

Survey	Year	Ever-Married Sample	Sibling history	Mother-Daughter Pairs	Women Respondents	M-D pairs as percent of women respondents
Haiti	2000			1,221	26,437	4.6
Haiti	2005-06		Y	1,294	24,830	5.2
Haiti	2012			1,794	29,013	6.2
Honduras	2005-06			3,084	50,093	6.2
Honduras	2011-2012			3,560	49,263	7.2
India	2005-06			20,804	256,782	8.1
Indonesia	2002-03	Y	Y	1,287	79,791	1.6
Indonesia	2007	Y	Y	1,383	84,726	1.6
Jordan	2002	Y		43	25,296	0.2
Jordan	2007	Y		133	43,460	0.3
Jordan	2009	Y		110	38,199	0.3
Kenya	2003		Y	993	22,074	4.5
Kenya	2008-09		Y	1,072	22,534	4.8
Lesotho	2004		Y	764	14,708	5.2
Lesotho	2009		Y	707	14,429	4.9
Liberia	2007		Y	733	22,123	3.3
Madagascar	2003-04		Y	877	20,799	4.2
Madagascar	2008-09		Y	2,078	48,464	4.3
Malawi	2000		Y	1,238	40,421	3.1
Malawi	2004		Y	958	35,883	2.7
Malawi	2010		Y	2,351	72,301	3.3
Maldives	2009	Y		683	20,136	3.4
Mali	2001		Y	834	48,407	1.7
Mali	2006		Y	1,290	52,140	2.5
Moldova	2005			1,258	9,903	12.7
Morocco	2003-04		Y	3,284	32,494	10.1
Mozambique	2003		Y	1,203	37,443	3.2
Mozambique	2011		Y	1,259	37,984	3.3
Namibia	2000		Y	668	14,946	4.5
Namibia	2006-07		Y	900	19,522	4.6
Nepal	2001	Y		259	28,955	0.9
Nepal	2006		Y	1,494	26,394	5.7
Nepal	2011			1,750	26,615	6.6
Nicaragua	2001			2,375	34,157	7.0
Niger	2006		Y	831	34,378	2.4
Nigeria	2003			799	23,038	3.5
Nigeria	2008		Y	3,091	104,808	2.9
Pakistan	2006-07	Y	Y	140	39,049	0.4
Peru	2004-08		Y	5,482	89,220	6.1
Philippines	2003			1,856	30,443	6.1
Philippines	2008			1,931	28,518	6.8

Survey	Year	Ever-Married Sample	Sibling history	Mother-Daughter Pairs	Women Respondents	M-D pairs as percent of women respondents
Rwanda	2000			1,319	27,602	4.8
Rwanda	2005		Y	1,561	30,072	5.2
Rwanda	2007-08			823	18,421	4.5
Rwanda	2010		Y	1,715	32,639	5.3
Sao Tome and Principe	2008-09		Y	342	7,620	4.5
Senegal	2005		Y	1,913	39,895	4.8
Senegal	2010-11		Y	1,757	42,510	4.1
Sierra Leone	2008		Y	471	21,136	2.2
Swaziland	2006-07		Y	674	11,410	5.9
Tanzania	2004-05		Y	1,123	30,557	3.7
Tanzania	2010		Y	1,250	29,777	4.2
Timor-Leste	2009		Y	2,016	35,998	5.6
Turkey	2003	Y		88	22,443	0.4
Uganda	2000-01		Y	626	23,410	2.7
Uganda	2006		Y	986	30,090	3.3
Uganda	2011		Y	939	28,609	3.3
Ukraine	2007			949	8,007	11.9
Zambia	2001-02		Y	933	23,805	3.9
Zambia	2007		Y	750	21,366	3.5
Zimbabwe	2005-06		Y	857	19,489	4.4
Zimbabwe	2010-11		Y	761	19,279	3.9
Total				167,973	3,680,426	4.6

Count 16 60
 Sibling history, all women 57

Among ever-married surveys 7,541 687,183 1.1
 Among all women surveys 160,432 2,993,243 5.4

Figure 1. Comparing Mothers' and Daughters' Reports of Daughter's Age

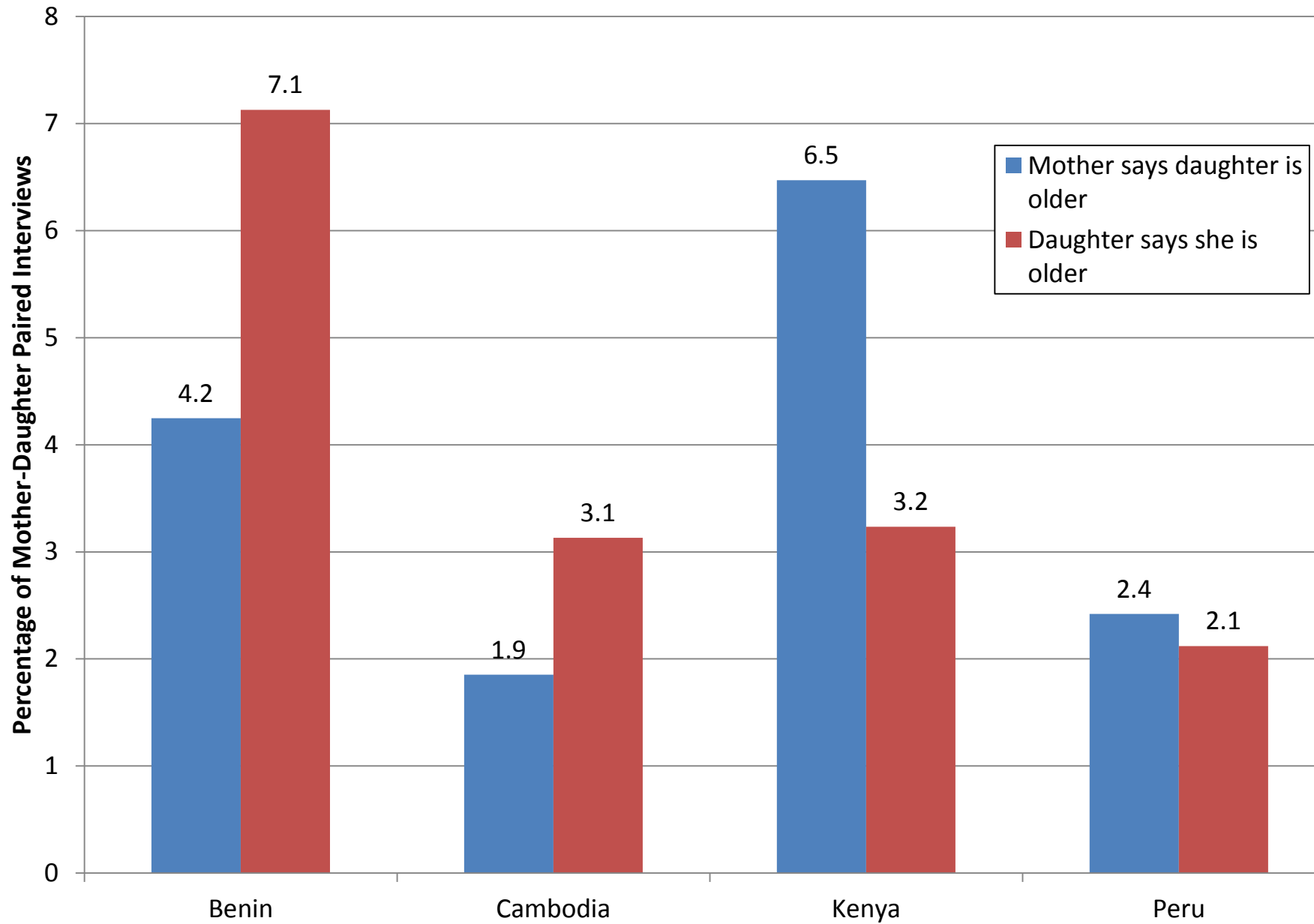


Figure 2. Comparing Mothers' and Daughters' Reports of Siblings

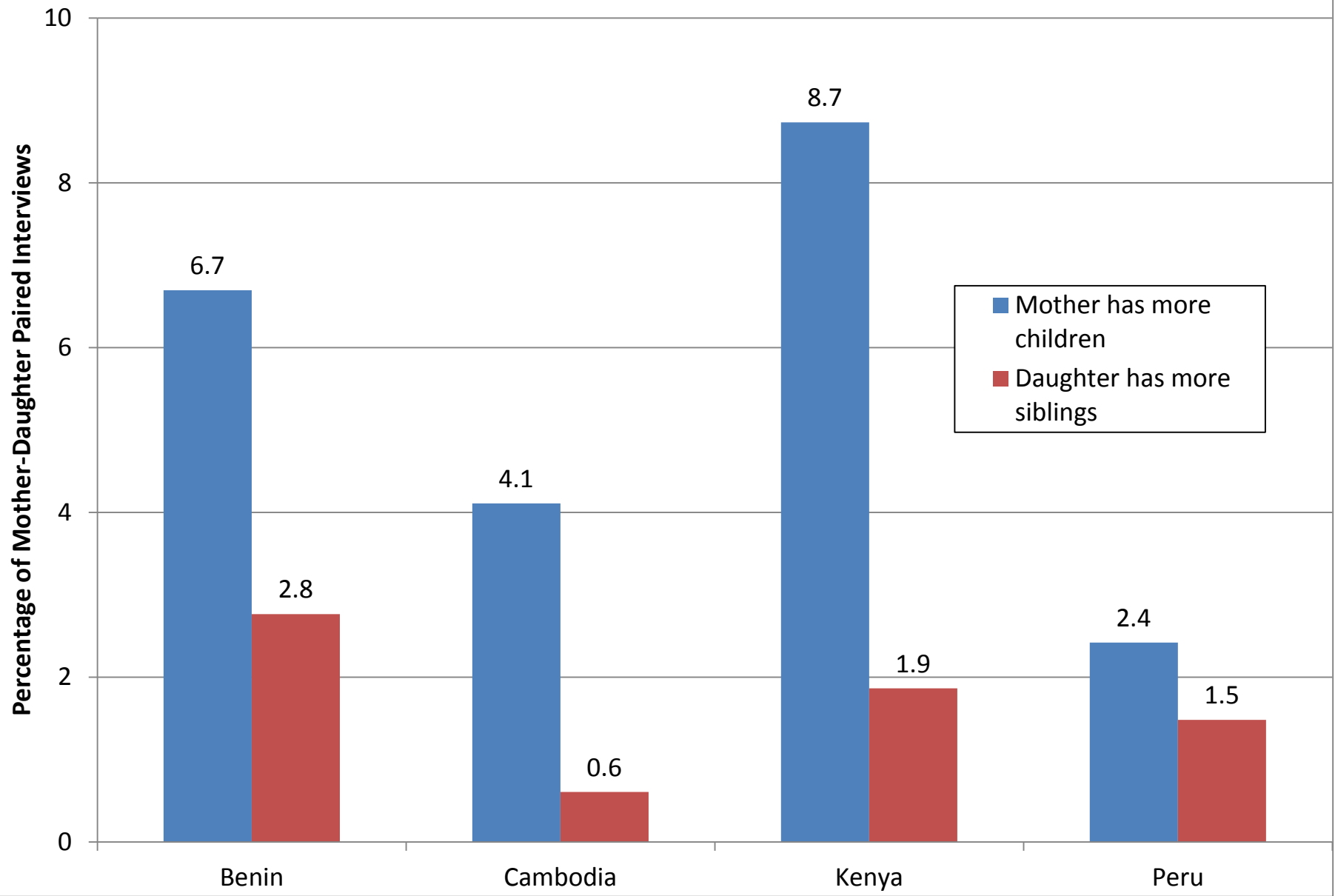


Figure 3. Comparing Mothers' and Daughters' Reports of Dead Siblings

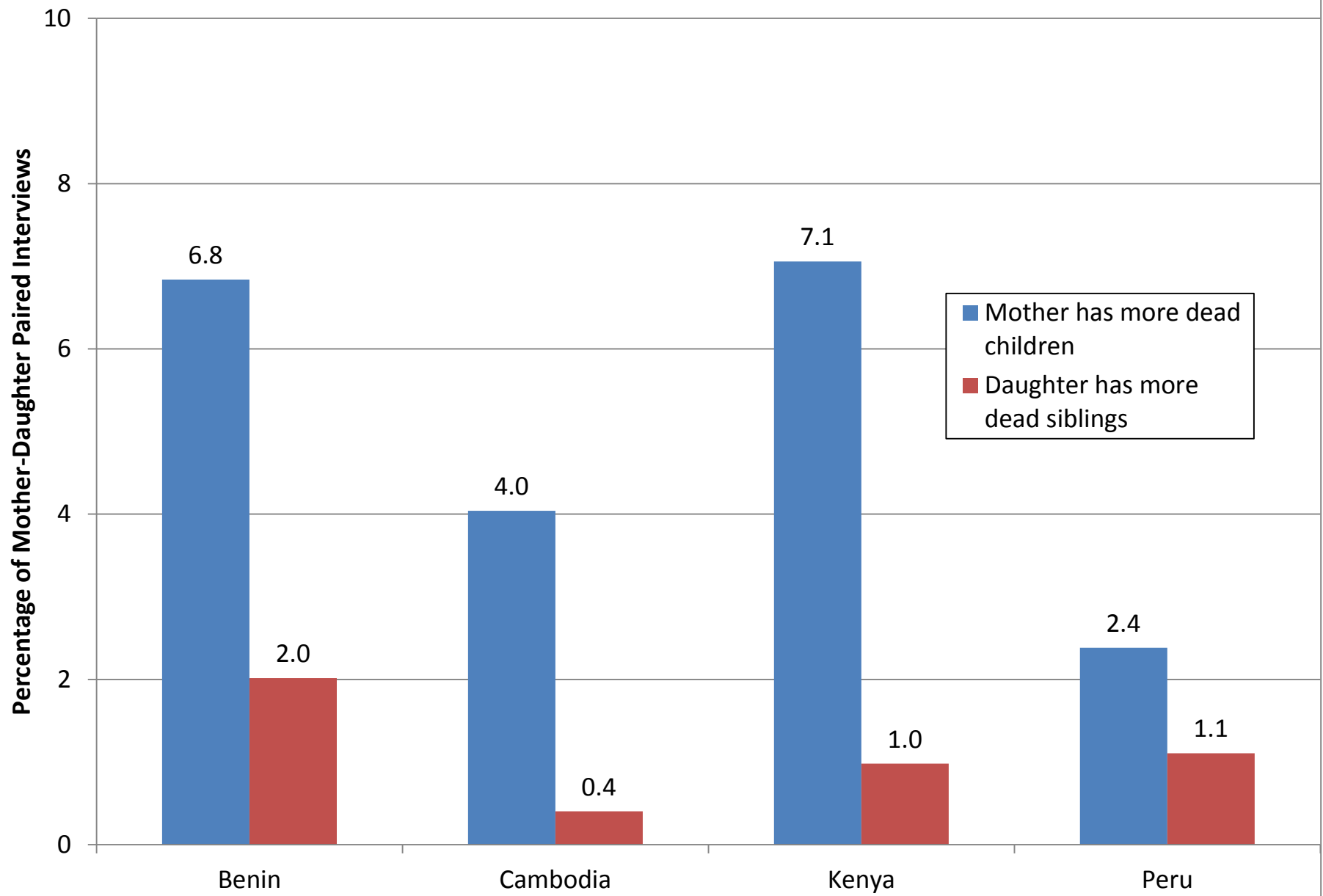


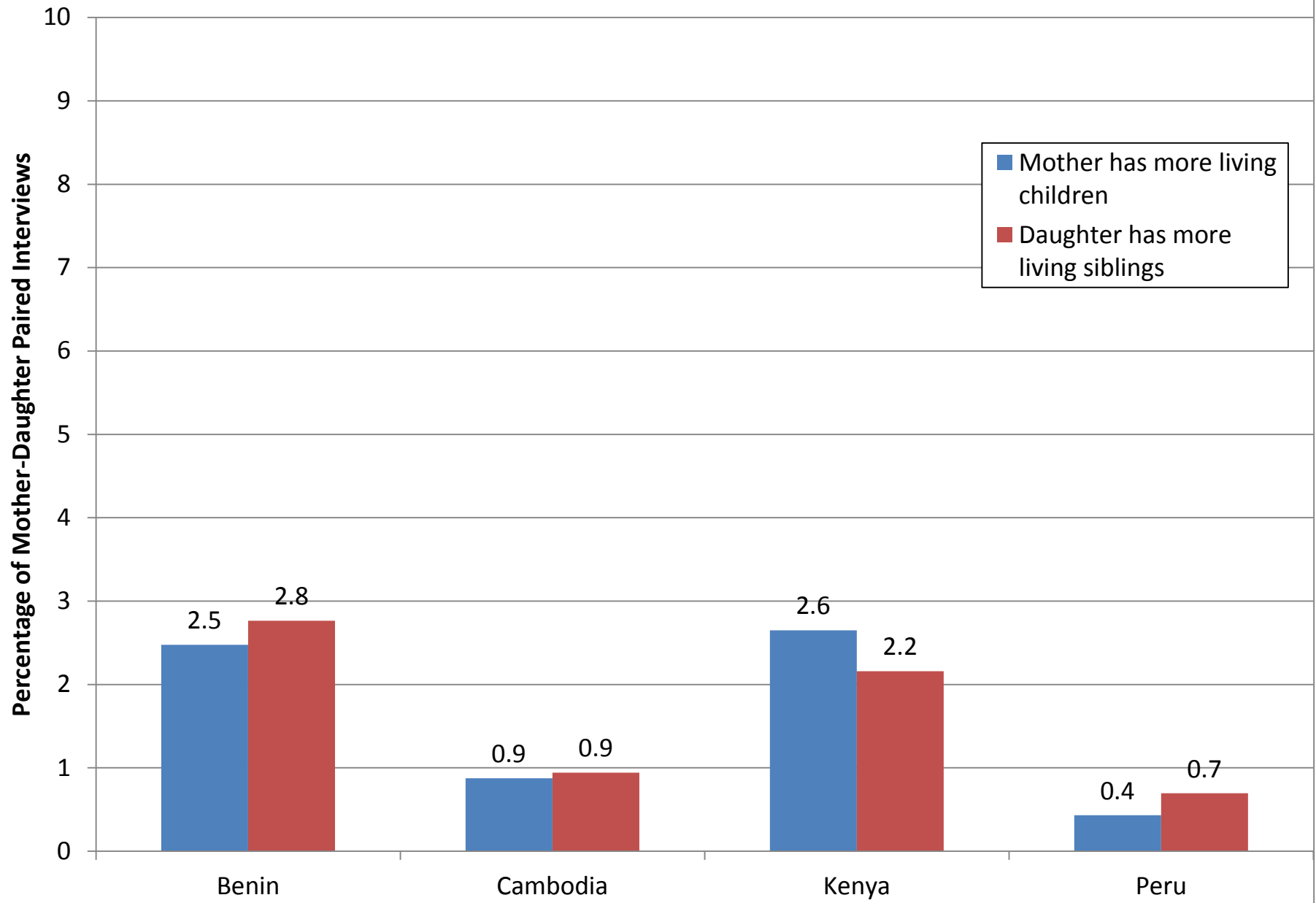
Table 3.

For daughter deaths less than mother's deaths:

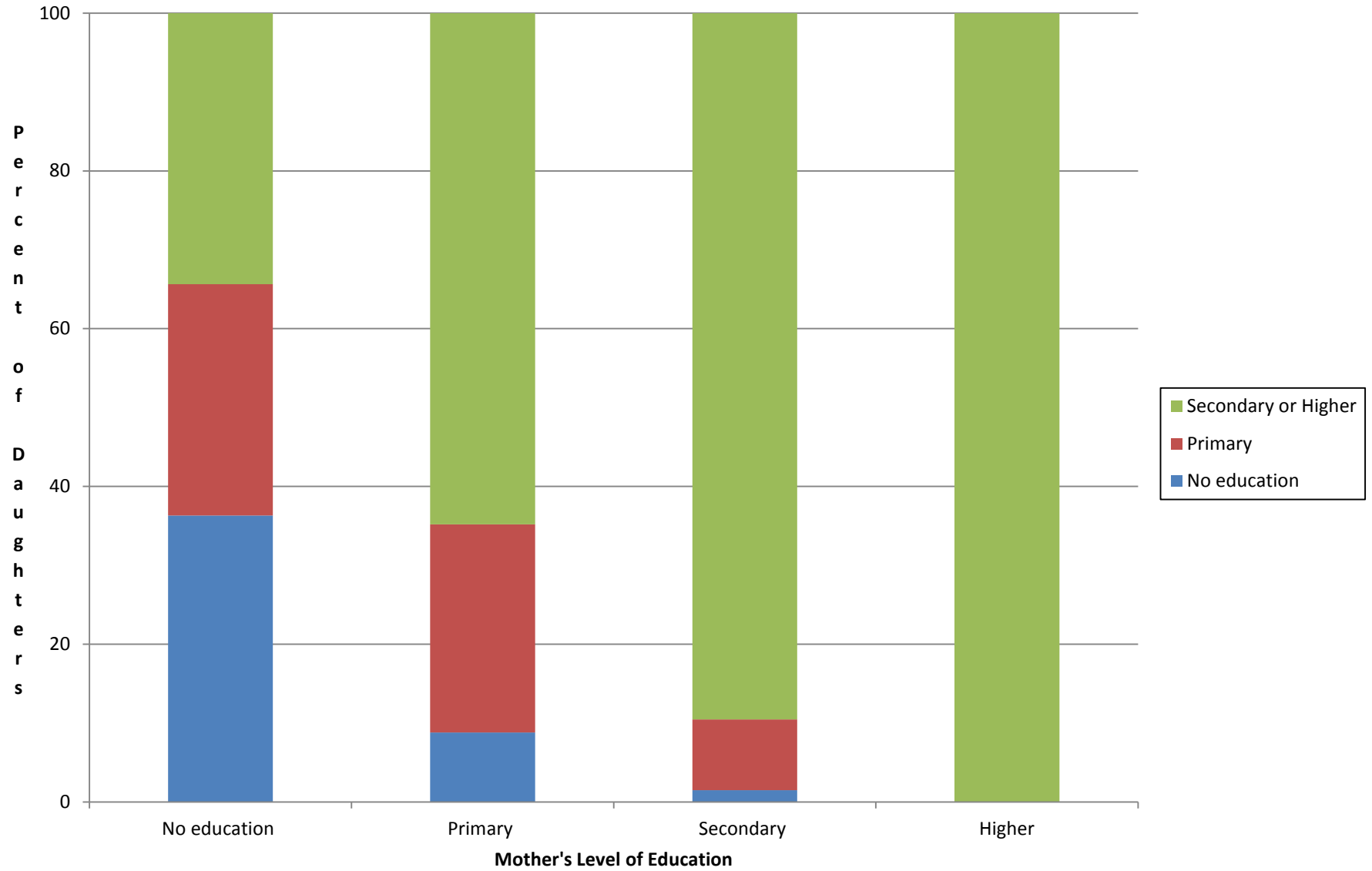
Percentage of deaths missed by daughter by age at death and to daughter's age at sibling's death

	Mother's children died at age 0 years				Mother's children died before age 5 years				Mother's children died before age 15			
	Daughter's Age at Death				Daughter's Age at Death				Daughter's Age at Death			
	Before birth	Before 5 Years	Before 10 Years	Number of deaths	Before birth	Before 5 Years	Before 10 Years	Number of deaths	Before birth	Before 5 Years	Before 10 Years	Number of deaths
Benin	30	16	8	37	31	12	7	58	35	15	6	65
Cambodia	29	23	13	31	31	23	14	35	34	26	18	38
Kenya	58	33	33	12	50	31	25	16	50	31	25	16
Peru	26	0	0	19	18	0	0	28	23	3	3	31
Total	32	17	11	99	31	15	9	137	34	17	11	150

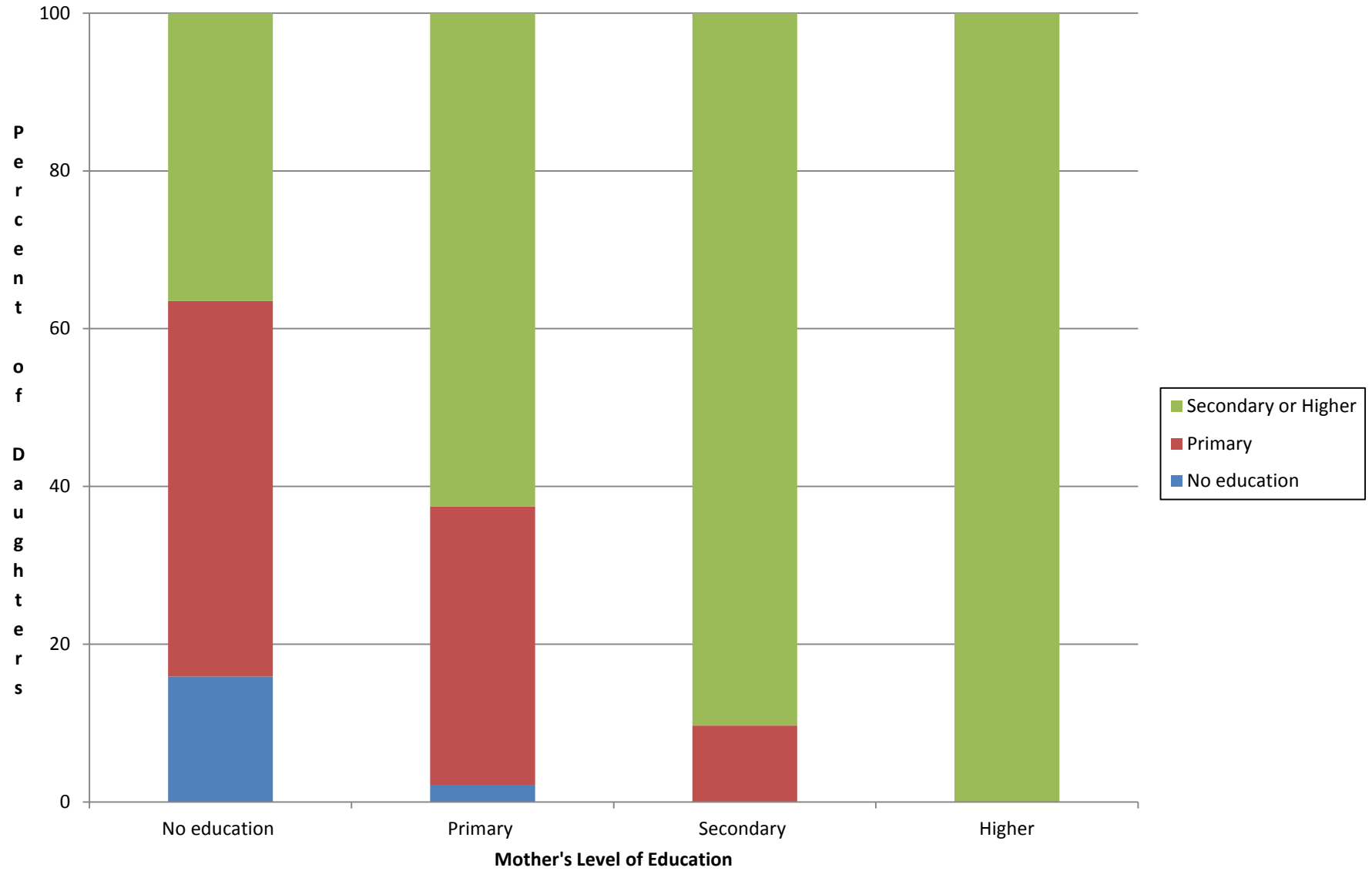
Figure 4. Comparing Mothers' and Daughters' Reports of Living Siblings



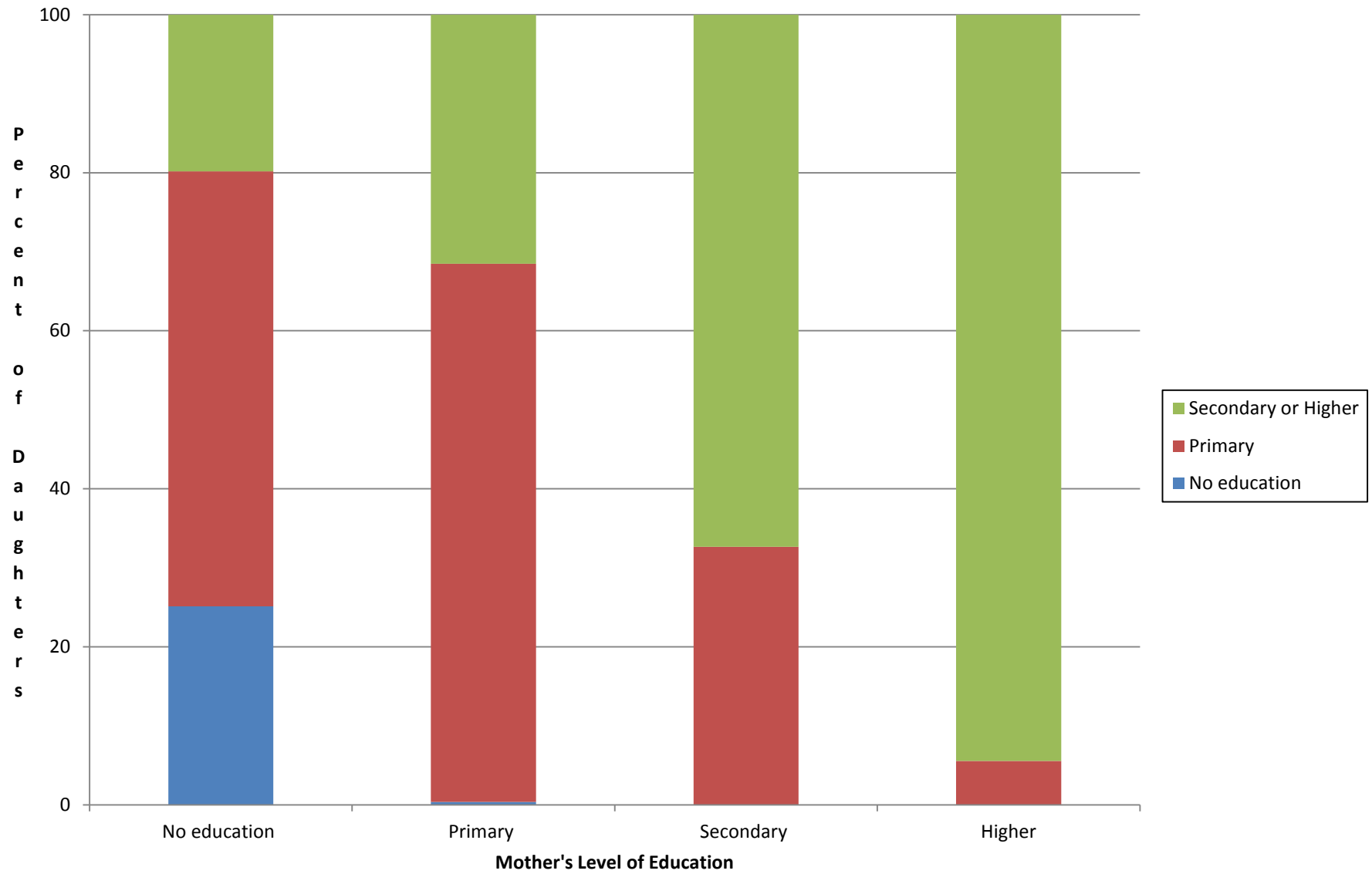
**Figure 5. Daughter's Level of Education by Mother's Level of Education
Benin**



**Figure 6. Daughter's Level of Education by Mother's Level of Education
Cambodia**



**Figure 7. Daughter's Level of Education by Mother's Level of Education
Kenya**



**Figure 8. Daughter's Level of Education by Mother's Level of Education
Peru**

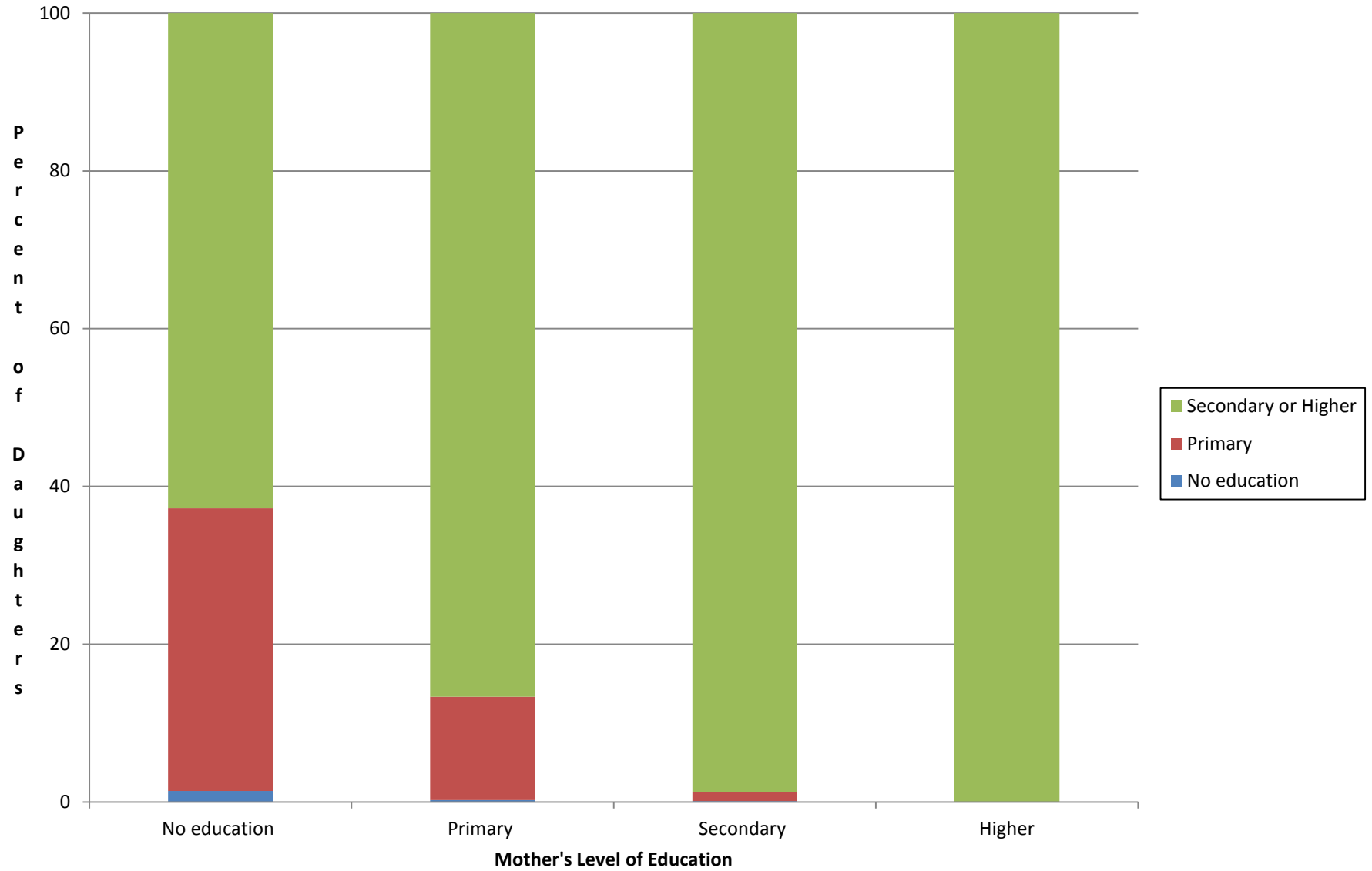


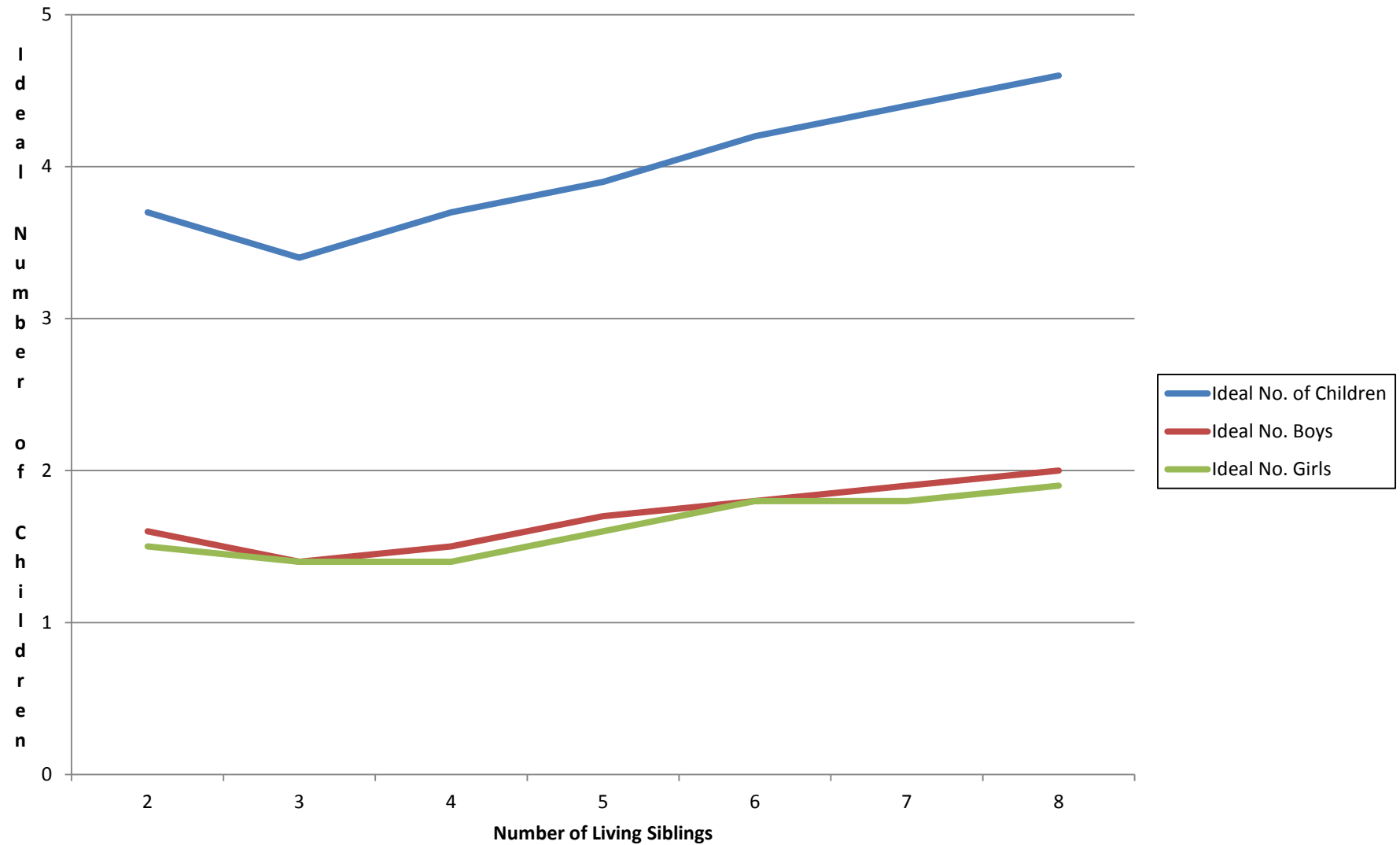
Table 4. Mean Difference between Mother's and Daughter's Height*

	Daughter's 5-year age group			Total ^A
	15-19	20-24	25-29	
Benin				
Mean	-3.3	-2.0	-0.1	-2.9
N	938	262	58	1260
Cambodia				
Mean	-1.0	0.4	0.0	-0.6
N	1010	372	117	1504
Kenya				
Mean	-2.6	-0.4	-0.7	-2.0
N	743	203	35	982
Peru				
Mean	1.2	1.9	1.5	1.4
N	2715	976	292	4012

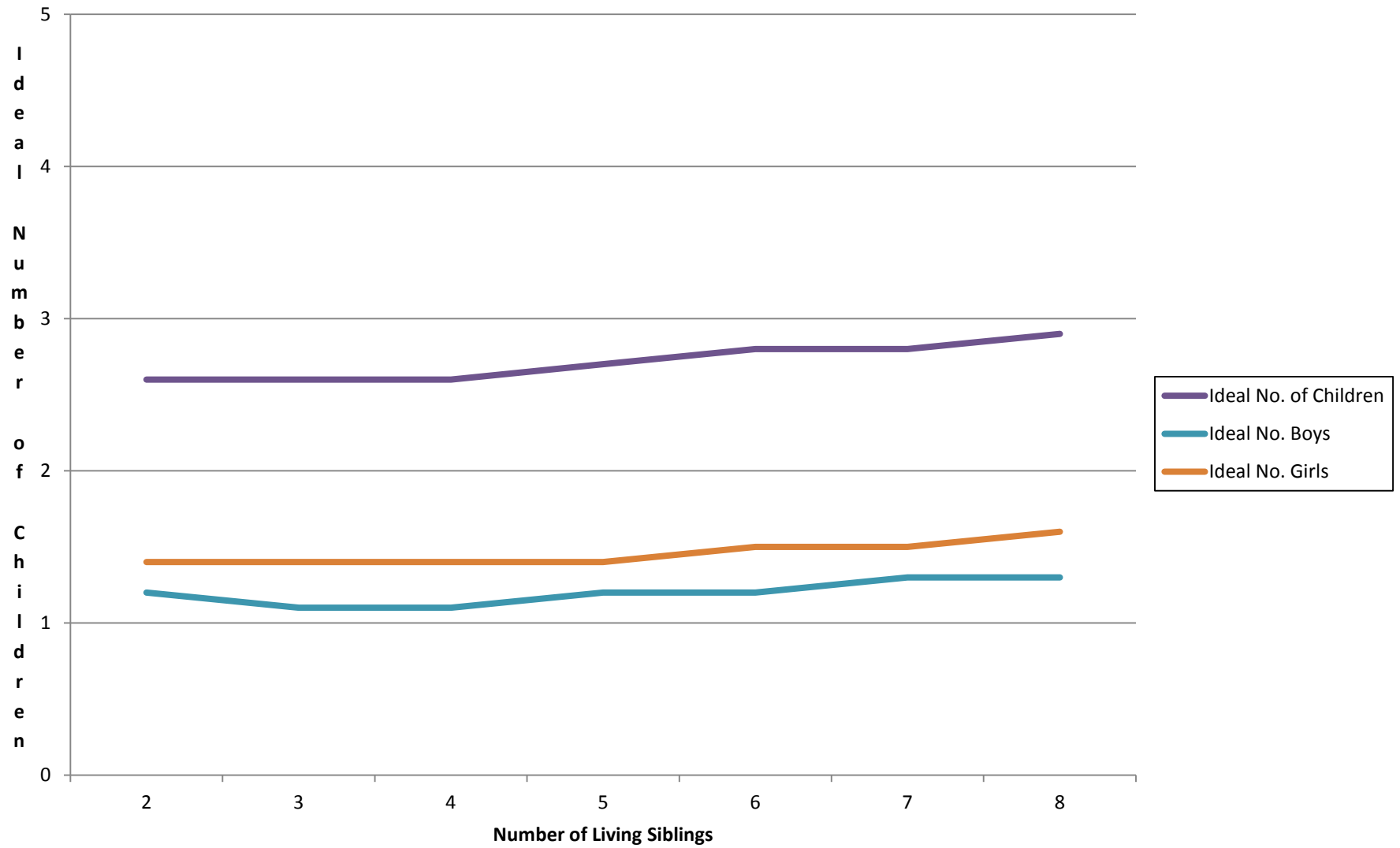
* Daughter's height less mother's height in centimeters

^A Includes daughter respondents of all ages

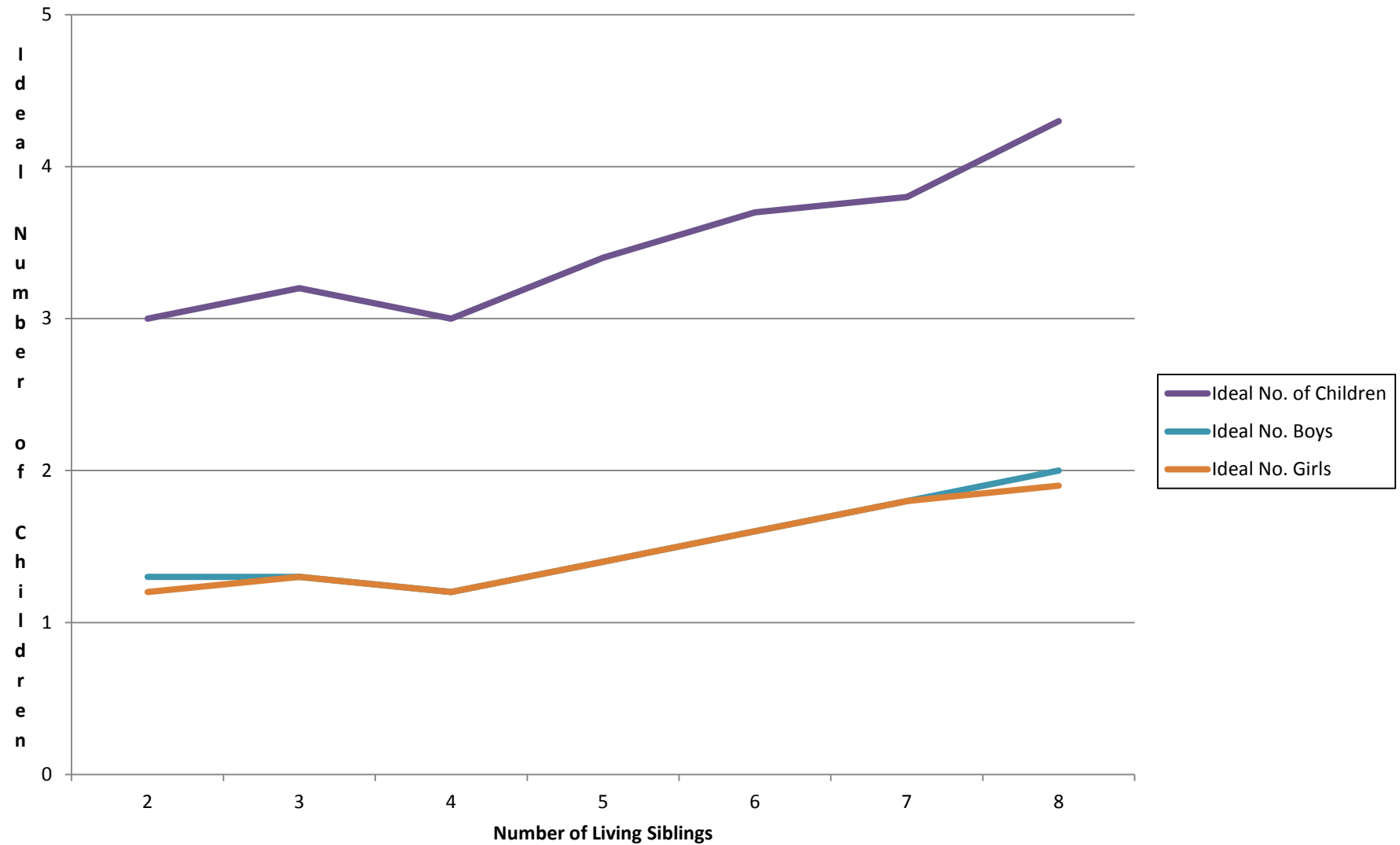
Figure 9. Daughter's Ideal Number of Children, of Boys, and of Girls by Number of Living Siblings Benin



**Figure 10. Daughter's Ideal Number of Children, of Boys, and of Girls
by Number of Living Siblings
Cambodia**



**Figure 11. Daughter's Ideal Number of Children, of Boys, and of Girls
by Number of Living Siblings
Kenya**



**Figure 12. Daughter's Ideal Number of Children, of Boys, and of Girls
by Number of Living Siblings
Peru**

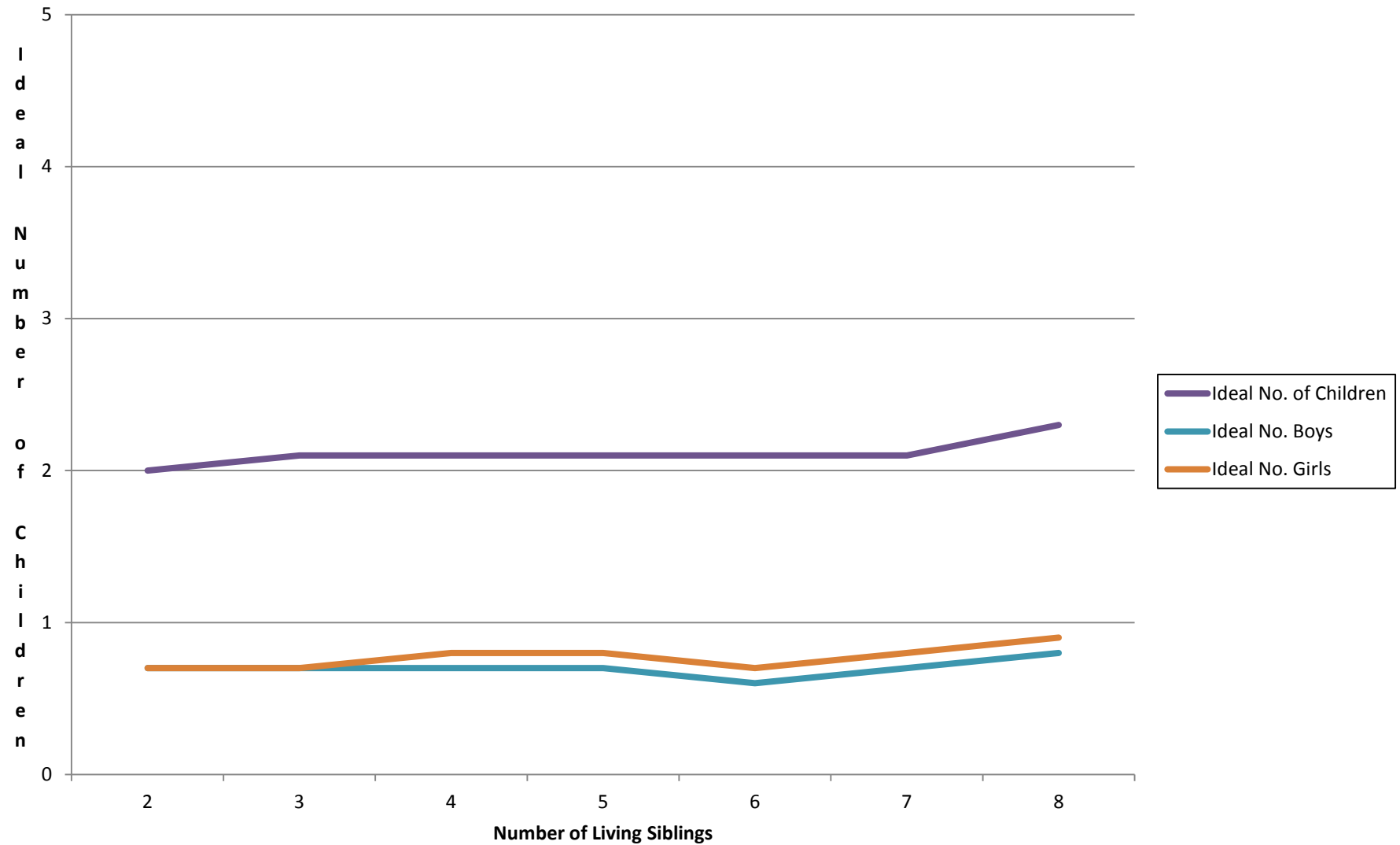


Figure 13 Height by Preceding Birth Interval

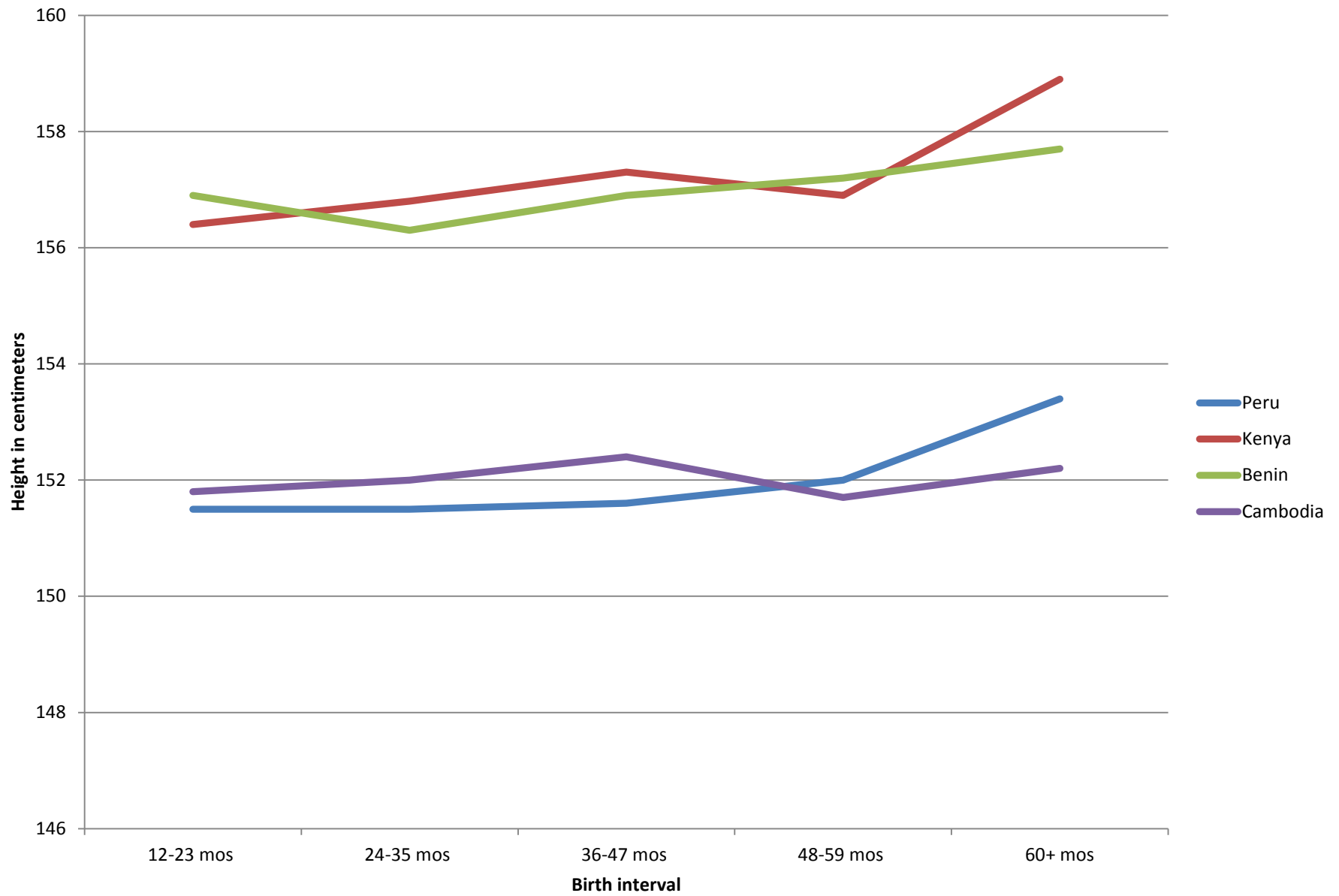


Figure 14. Daughter's Height by Her Birth Order

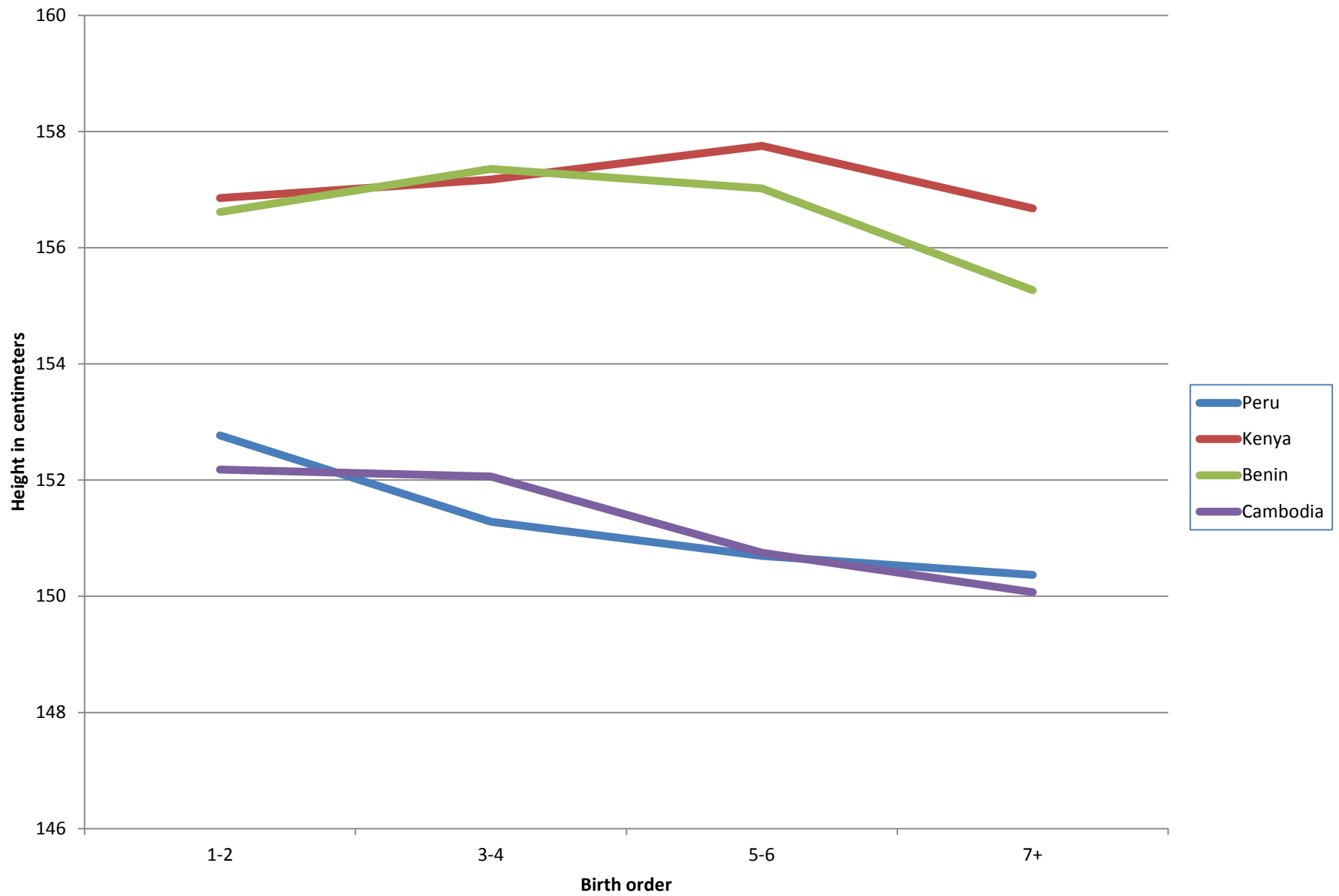


Figure 15. Daughter's Height by Mother's Age at Daughter's Birth

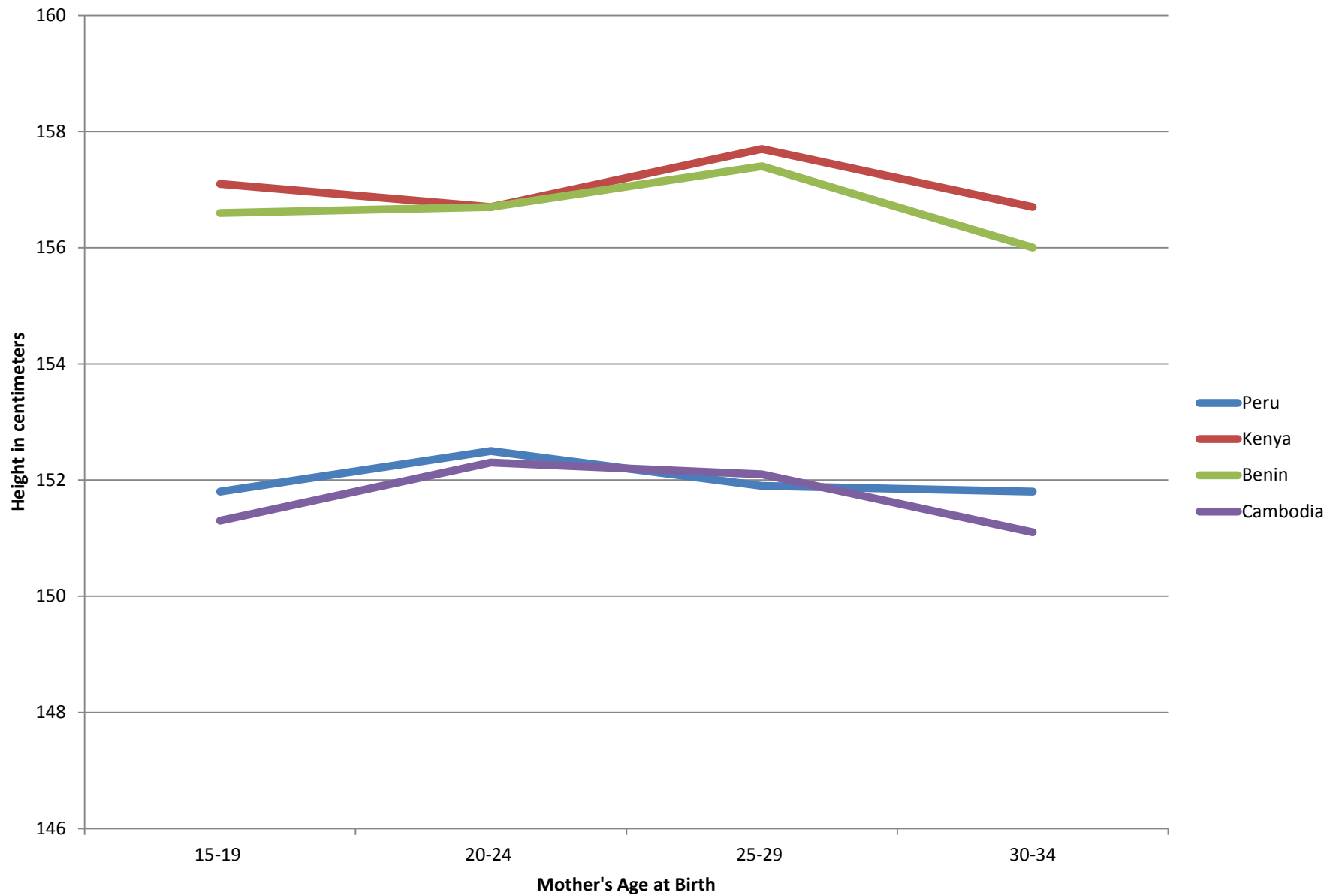


Figure 16. Daughter's Low BMI by her Preceding Birth Interval

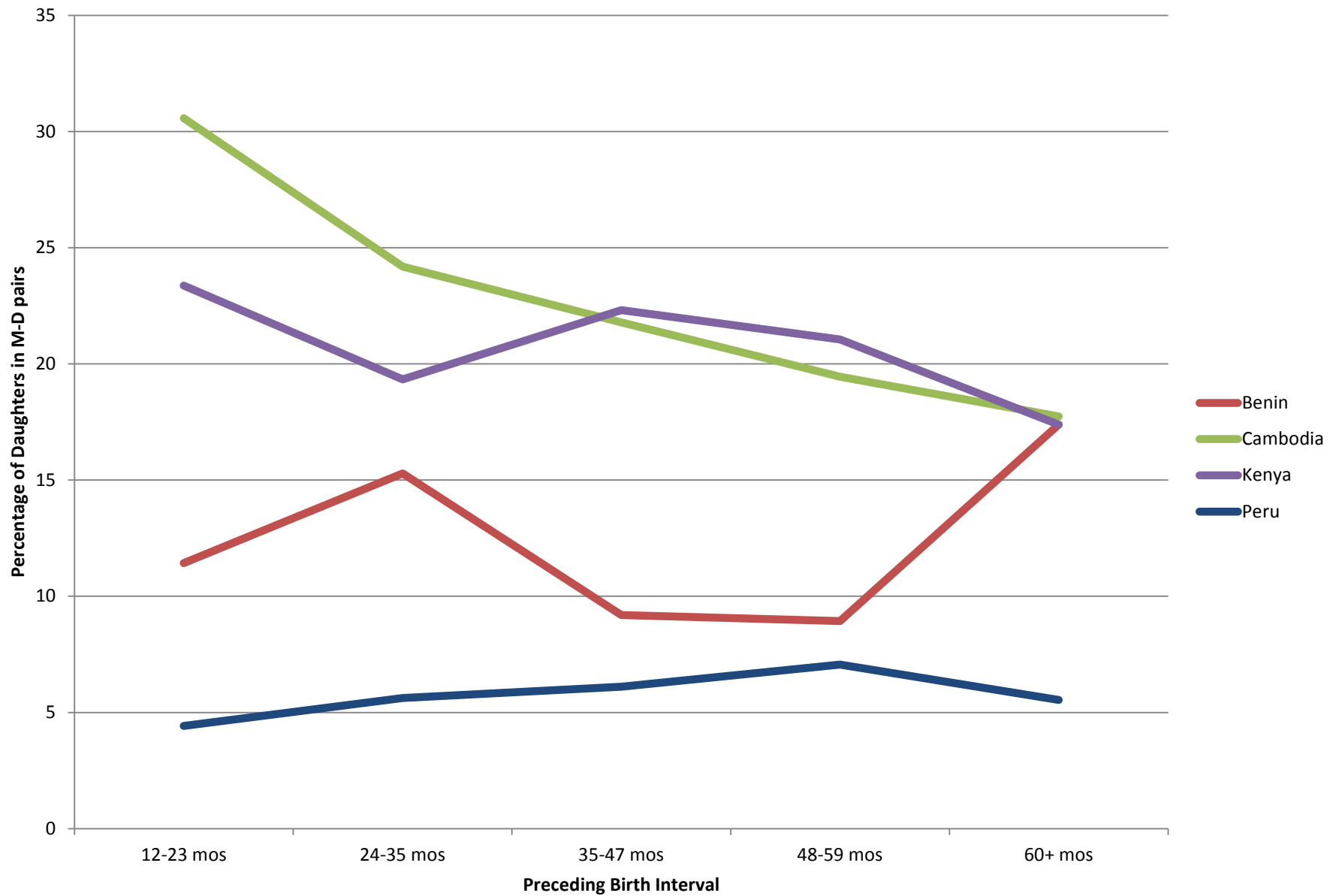


Figure 17. Daughter's Low BMI by her Birth Order

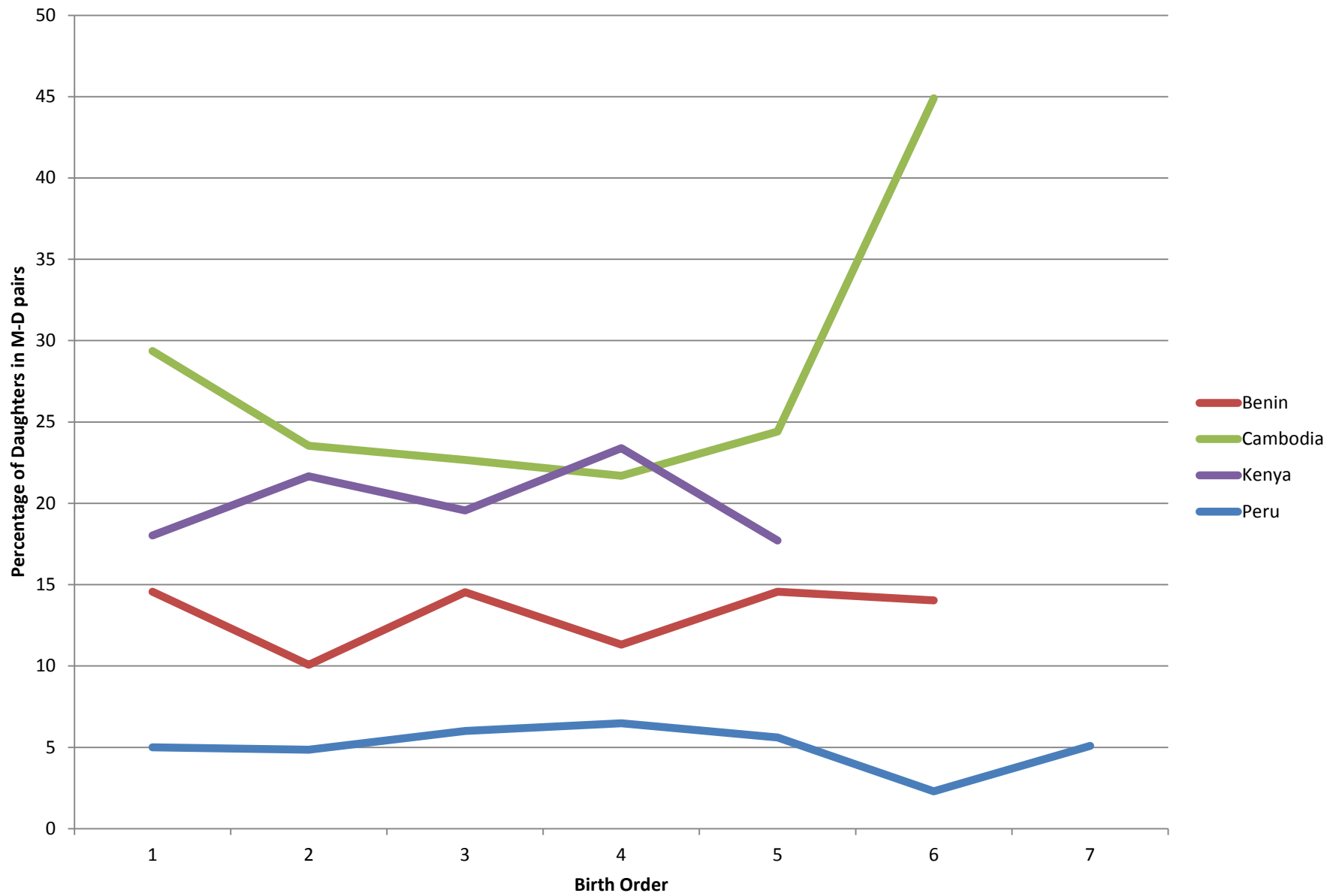


Figure 18. Daughter's Low BMI by her Mother's Age at her Birth

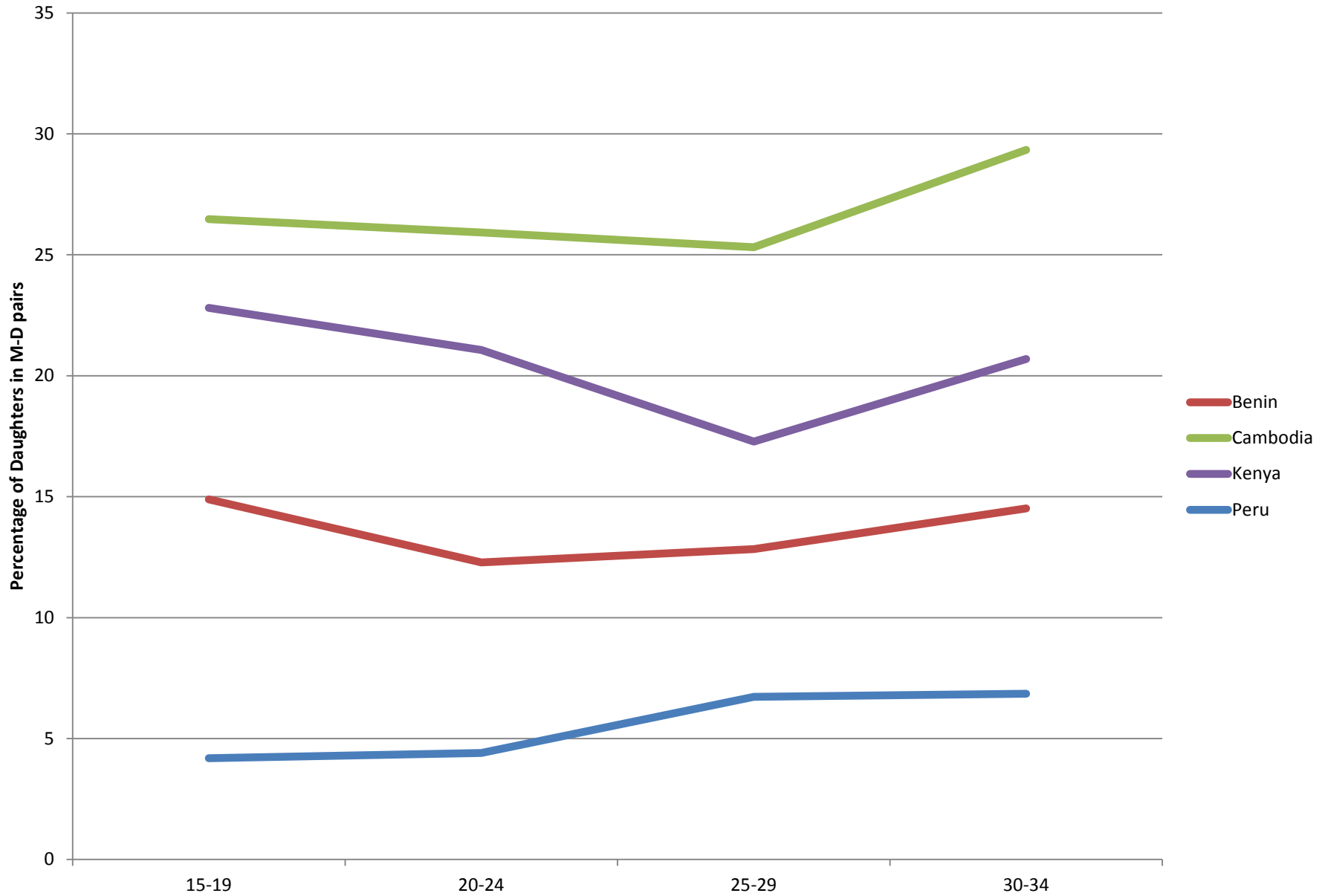


Figure 19. Daughter's High BMI by her Preceding Birth Interval

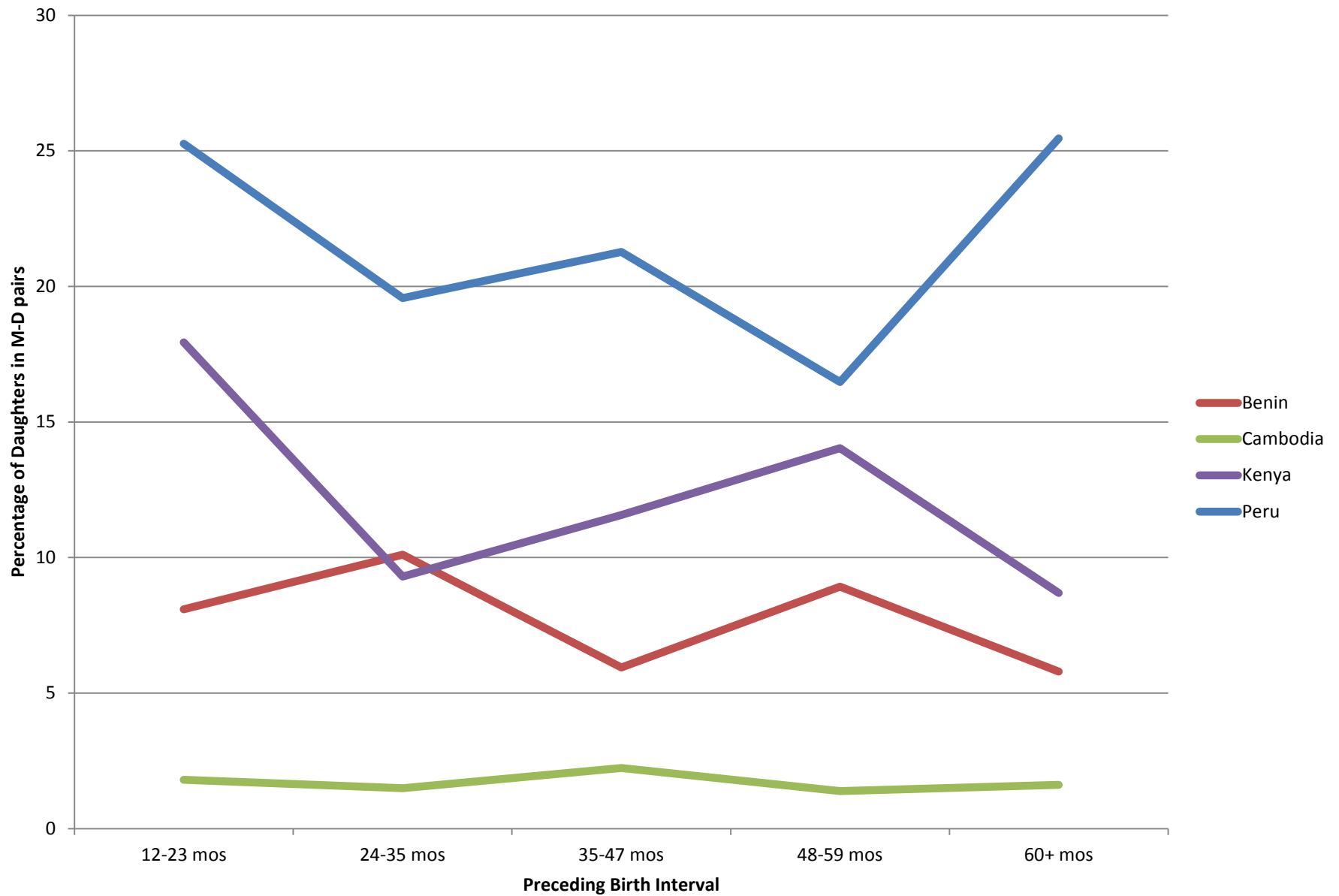


Figure 20. Daughter's High BMI by her Birth Order

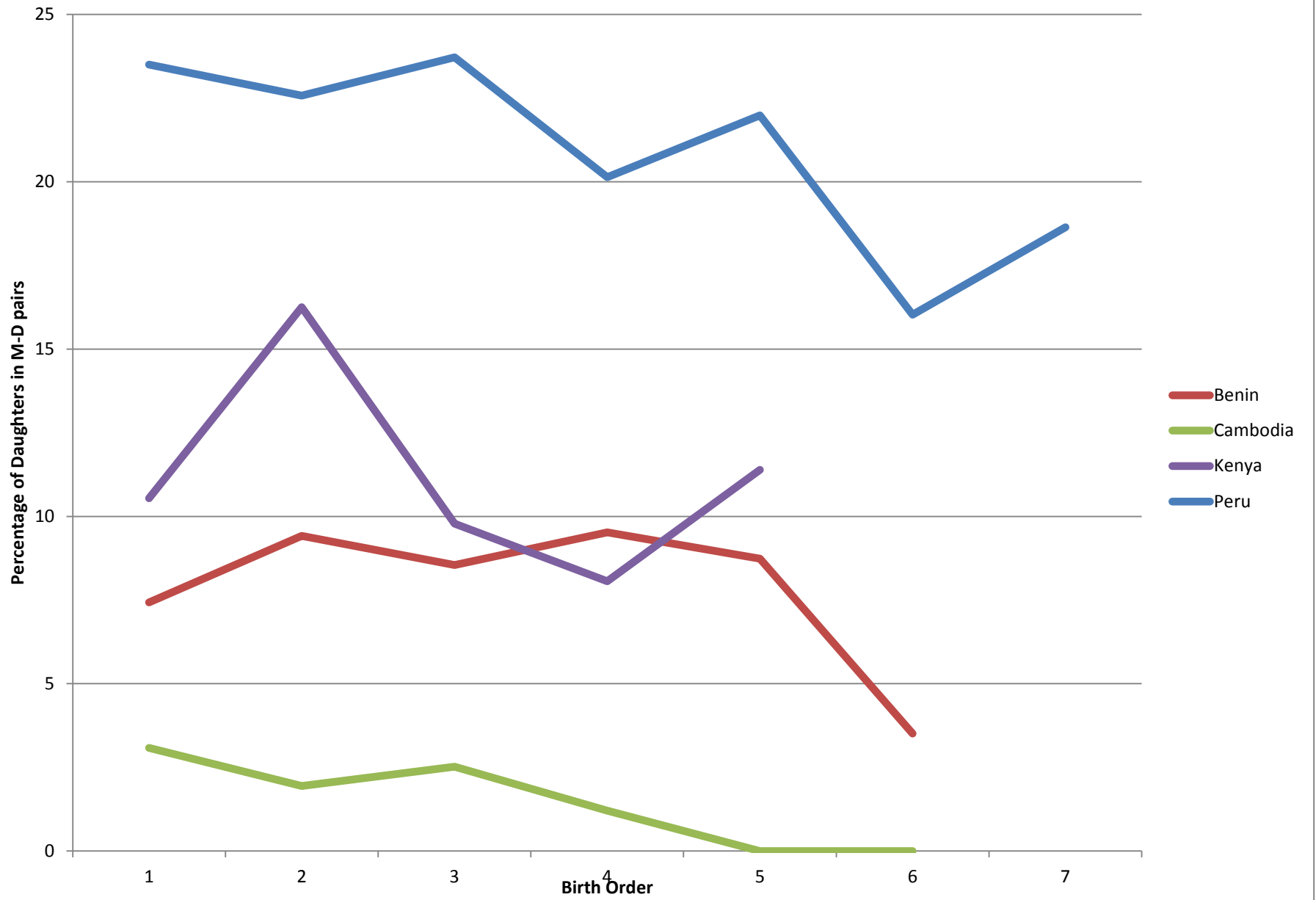


Figure 21. Daughter's High BMI by her Mother's Age at her Birth

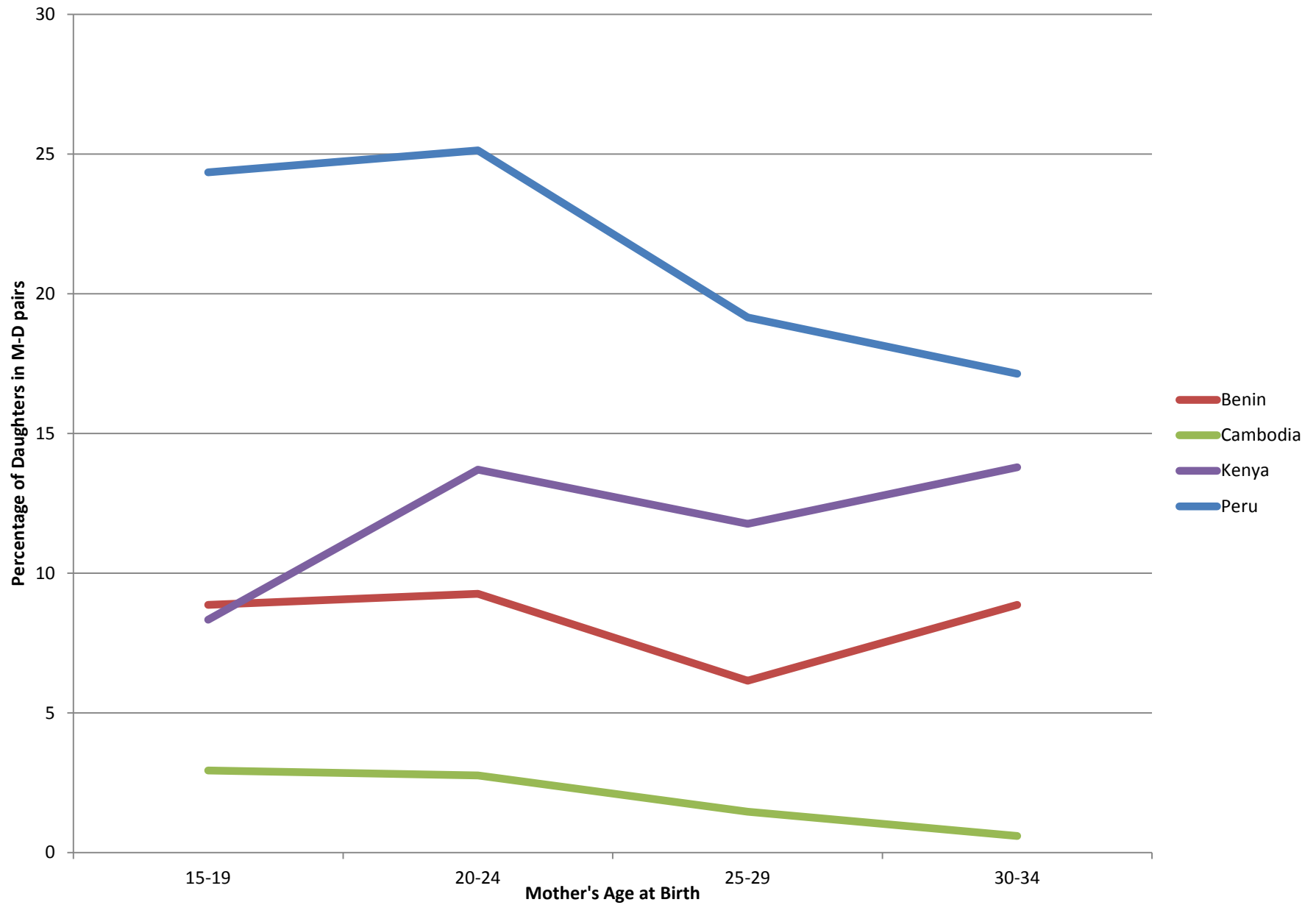


Table 5

Daughter's Mean Years* of Education by preceding birth interval, her birth order, and her mother's age at her birth (For daughters 20 years and older)				
	Benin	Cambodia	Kenya	Peru
Daughter's preceding birth interval				
<11 mos	5.0	5.8	10.2	10.2
12-23 mos	4.9	6.6	8.2	10.5
24-35 mos	5.1	6.7	9.2	10.5
35-47 mos	5.7	7.0	10.3	10.5
48-59 mos	4.6	6.5	10.1	10.6
60+	5.7	6.0	7.4	11.4
Daughter's own birth order				
1	5.9	6.8	9.6	11.0
2	4.7	6.9	9.7	10.8
3	5.4	6.4	8.3	10.4
4	5.2	6.3	9.0	10.4
5	6.8	7.3	9.3	10.2
6	3.2	6.4	7.9	9.4
7	4.3	3.0	10.3	9.9
8	4.0			4.3
9	3.5			
Mother's age at birth of daughter, grouped				
<15	4.3	4.6	8.2	9.9
15-19	3.6	6.2	9.2	10.6
20-24	5.7	6.8	9.6	10.8
25-29	7.3	7.0	9.0	10.8

* More than 12 years is coded 12 years.

**Figure 22. Daughter's Mean Years* of Education
by her mother's age at her birth
(Daughters age 20 or more years)**

