Title: Is Working Risky or Protective for Married Adolescent Girls in Urban Slums in Kenya? An Exploration of the Relationship between Work, Savings and Physical Violence.

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Abstract:

Previous studies have shown that women's empowerment, though beneficial in many aspects, can also increase the risk of intimate-partner violence (IPV). This study seeks to examine the effects of work on experience of physical violence among married adolescents, and to understand the impact of access to independent financial resources (savings) on this risk. Authors draw on marital dependency theory the asset-building framework and the ecological model. Logistic regression is used with a unique sample of married adolescents residing in urban slums in four cities and towns in Kenya. This is complemented by analysis of in-depth interviews with adolescent girls and young men. Results show that work is associated with an increased risk of IPV, but only for girls who are not saving regularly, and having a partner who trusts the girl with money is protective. Savings decrease girls' dependency on men and allow them to leave abusive partners.

Background:

Intimate-partner violence (IPV) is one of the most common forms of gender-based violence. According to the World Health Organization, 39% of women in East Africa have ever experienced intimate partner violence. In the 2009 Kenya Demographic and Health Survey, the prevalence of physical violence among ever-married women was 37% for all women and 20% of girls aged 15-19. Consequences of IPV include adverse health outcomes, including physical, mental and reproductive health, loss of income, and effects on children's schooling and health (WHO, 2013).

Studies of socioeconomic risk factors associated with IPV have produced mixed results. In a study using DHS data from 10 countries (Hindin et. al., 2008), education was protective in Kenya, Bolivia and Zimbabwe, but a risk factor in Haiti. Not working was protective in Bolivia, the Dominican Republic and Zimbabwe, while working in agriculture was a risk factor in Malawi. A review of the literature exploring the relationship between women's economic empowerment and risk of IPV also highlights the complexities that have resulted in mixed findings (Vyas & Watts, 2009). In studies in India, rural Bangladesh, Nicaragua and Dominican Republic, employment was associated with increased risk (Kishor & Johnson, 2004; Naved & Persson, 2005) while in Haiti, urban Bangladesh, Zambia and Cambodia there was no association but in Haiti and Egypt earned income was protective against physical violence. In urban India, although women who worked had a higher prevalence of physical violence, they were more likely to seek help for IPV (Dalal, 2011).

There is some evidence that empowerment programs can reduce risk of IPV, especially when combined with social empowerment approaches. An evaluation of the IMAGE study in South Africa, a women's micro-credit program, showed a reduction the risk of experiencing violence due to both women's economic and social empowerment (Kim et. al., 2007). A study in north India found protective effects of financial autonomy and freedom of movement in reducing the risk of marital violence (Sabarwal, Santhya & Jejeebhoy, 2013). Similarly, a randomized-controlled trial in Cote d'Ivoire showed a greater

decrease in reports of IPV for women who participated in group savings in addition to gender dialogue group, as compared to group savings alone. In one of the few studies of adolescents, an evaluation of a program aimed at building girls' social health and economic assets in Uganda, researchers found an increased risk of sexual harassment for girls who received individual savings accounts alone, compared to those who also participated in safe spaces groups where they received financial education and reproductive health training (Austrian & Muthengi, 2014).

Empowerment of vulnerable girls is a recommended strategy for preventing the risk of gender-based violence, particularly as part of a multi-sectoral approach (Blanc et. al., 2013; UNICEF 2011). However, as the literature on women's programs shows, understanding the potential risks of economic strengthening is key to minimizing harm to girls. This study makes a unique and significant contribution to the wide literature on empowerment and IPV because it is one of the first to demonstrate the association between work, savings and IPV among adolescent girls. Furthermore, the study focuses on a sample of vulnerable girls who are disadvantaged both due to early marriage and residence in urban slums.

Using both quantitative and qualitative methods, we seek to examine the effects of work on experience of physical violence, and to understand the impact of access to independent financial resources (savings) on this risk. Authors draw on marital dependency theory the asset-building framework and the ecological model to hypothesize about the relationships between work, savings and IPV. According to marital dependency theory, women with few economic resources are economically dependent on their partner and cannot easily leave their partner or negotiate change, which increases risk of IPV (Dobash & Dobash, 1979; Gelles, 1976; Kalmuss & Straus, 1992; Strube & Barbour, 1983). The asset-building framework views assets such as savings as a store of value that girls can use to both reduce vulnerabilities and expand opportunities (Bruce and Sebstad, 2004; Austrian & Ghati, 2010). Several studies have shown a positive association between economic strengthening improvements in girls' sexual behavior, reproductive health outcomes (Austrian & Muthengi, 2013; Erulkar & Chong, 2005; Ssewemala et. al., 2008). The ecological model recognizes that there are multiple causes of violence and the interaction of factors operate through individual, relationship, community and social levels (Heise, 1998). Therefore, while the realities of life in urban slums and relationship dynamics can increase working girls' risk of IPV, economic assets such as savings, and increased trust regarding money management could reduce that risk.

Methods:

This study uses a unique dataset of adolescent girls residing in low-income, informal settlements (slums) in four Kenyan cities and towns: Nairobi, Kisumu, Nakuru and Thika. The data were collected by Population Council between August and December, 2013 as part of a baseline survey for an intervention program aimed at building social, health and economic assets for vulnerable adolescent girls in the four cities locations. Two equivalent sites in each city/town were selected and a household listing was conducted to identify girls ages 15-19. A total of 28,768 households were listed, 5,100 eligible girls were identified, and 3,255 interviews were conducted, with a response rate of 64%. The main reasons for non-response were refusal to consent to the interview, and inability to locate the respondent after three visits. After excluding 31 girls who were outside the age range of 15 to 19, the total sample included

3,224 interviews girls. The analytical sample for this study was 452 married girls who were living with their husbands at the time of the survey.

Bivariate analysis was conducted to compare demographic characteristics between girls who worked for pay within the previous year as well as to examine differences in experience of physical violence by work and savings characteristics among girls who did work. Physical violence was based on a question asking: "How many times in the last six months has your husband/partner hit, slapped, kicked or beaten you?" The Pearson's Chi-Square test was used to test for significant differences at the level of $p<0.05$. Multivariate logistic regression models were used to estimate the effect of work status, saving, and trust regarding money on the experience of physical violence adjusting for other factors. In bivariate and multivariate analysis, the survey design is taken into account with Stata's survey analysis techniques.

Qualitative data were collected between July and August, 2014. Using purposive sampling, stratified profiles of respondents were created and identified with the assistance of community leaders. In-depth interviews were conducted with 8 females (ages 15-24) and 4 males (ages 20-30) in each of the four sites (48 total). Interviews were recorded, transcribed and translated into English for analysis using Atlas.ti. These data are currently being analyzed and findings will be included in the full paper.

Results:

Girls who had worked did not significantly differ from married girls who had not worked on most demographic characteristics. Half of the girls were age 19 (55%), a third were age 18 (33%) and 12% were between the ages of 15 and 17. The mean age of marriage was 17 years and the mean husband's age at the time of the survey was 24 years. Almost all girls reported that their husbands had worked for pay during the previous month (91%). The majority of girls were Christian (70% Protestant, 25% Catholic). About one in ten married girls had lost their mother (10%), and one out of five had lost a father (21%) and 13% had lost both parents. Most girls had begun childbearing with 51% having one child and 10% having at least two children. Household living conditions and ownership of assets did not differ between working and non-working girls. About half of girls (54%) owned a mobile phone, 32% owned jewelry, 65% resided in a home with electricity, and less than half had water piped to their residence (41%). The only significant difference between girls who worked and those who did not was their current school status. Almost all girls had dropped out of school by the time of the survey (98%).

About two-fifths (43%) of girls had worked for pay within the previous year. The mean age at which they first started working for pay was 16.6 years. The types of work included: domestic worker (32%), temporarily doing housework or childcare (26%), working in a hotel (25%), selling things (24%) plaiting hair (9%) and other work (15%). Most girls did only one type of job (67%), one in five did 2 jobs (22%) and 12% of girls did 3 or more jobs. Almost half of girls (45%) reported working for at least 7 months of the year. The mean monthly income from all jobs was Ksh 3,731 (USD 43.9). More than half of girls (59%) did not save any of their money within the previous six months. A quarter of girls saved irregularly (26%) and 16% saved usually or always. Most girls reported that their partner trusts them with money (88%).

At the bivariate level, about a quarter of girls who worked experienced physical violence in the previous 6 months compared to 16% of girls who did not work ($p<0.05$) . Of the working characteristics described above, the only one associated with violence was the partner's trust with money. More than half (60%)

of girls whose partners did not trust them with money experienced violence, compared to 21% of those who did ($p<0.05$).

Multivariate logistic regression models were estimated to examine the effect of the key independent variables on experience of violence, controlling for age, education, religion, socioeconomic status (ownership of jewelry), husband's age, husband's work status and number of children. Of these, factors associated with a reduced risk of physical violence were primary education (OR=0.400, $p<0.05$), secondary education (OR=0.209, $p<0.01$), and ownership of jewelry (OR=0.549, $p<0.05$). In the first model including each key independent variable separately, work was associated with 87% greater odds of violence compared to not-working (OR=1.87, $p<0<0.01$), saving regularly was not associated with violence, and partner trust regarding money was associated with 63% lower odds of violence compared to not having partner trust (OR=0.365, $p<0.05$). The second model included a variable that compared girls who did not work with: 1) those who worked and did not save regularly and 2) those who worked and saved regularly, controlling for the same variables. In this model, there was no significant difference between girls who worked and saved regularly and those who did not work. However, work with no regular saving was associated with 95% greater odds of violence compared to not-working (OR=1.959, $p<0.01$). Lastly, a third model was estimated to examine effect of the amount of money earned. A variable was created comparing girls who did not work with: 1) earning less than the median income (Ksh 3,001; USD 35.4) with no regular saving, 2) earning the median income or more with no regular saving, and 3) work and regular saving. Results showed that only earning a higher income with no regular saving was significantly associate with increased experience of physical violence (OR=2.640, $p<0.05$). The independent protective effect of partner trust with money remained significant in both Model 2 and Model 3.

Qualitative findings will examine respondent's perceptions regarding the associations between wives' work and savings and the experience of physical violence, relationship dynamics and other contextual factors that increase the risk of physical violence. Responses by males and females will be compared and contrasted. Preliminary analysis indicates that girls perceive savings as enabling them to be less dependent on men, impacts their choice of partner and increasing their ability to leave a partner who becomes violent or threatens them with violence.

Findings highlight that while economic empowerment in the form of work for married adolescent girls has the potential to be protective; it also may carry increased risk for experiencing violence, depending on the context in which a girl works. The role of savings for this population, especially in the context of broader economic strengthening programming, may also play a key role in risk mitigation. The full programmatic implications of the results and potential explanations will be discussed in the full paper.

Multivariate Logistic Regression Results Predicting Experience of Physical Violence in the Previous Six Months, Married Girls, Age 15-19 (N=445)

	Model 1		**Model 2**		**Model 3**	
	OR	[95% CI]	OR	[95% CI]	OR	[95% CI]
Age (Ref=15-17):						
18	0.555	0.215 – 1.434	0.567	0.219 – 1.467	0.567	0.219 – 1.468
19	0.644	0.348 – 1.190	0.680	0.372 – 1.240	0.642	0.323 – 1.277
Education (Ref=Some Primary):						
Primary complete	0.400*	0.205– 0.783	0.407*	0.219– 0.756	0.398*	0.207 – 0.767
Some secondary	0.444†	0.173 – 1.139	0.452†	0.173 – 1.181	0.439†	0.171 – 1.125
Secondary complete	0.209**	0.077 – 0.573	0.214**	0.087 – 0.529	0.204*	0.073 – 0.575
Religion (Ref=Catholic):						
Protestant/Other	0.906	0.555 – 1.477	0.891	0.566 – 1.401	0.925	0.582 – 1.470
Owns Jewelry	0.549*	0.339 – 0.890	0.560*	0.347 – 0.902	0.564*	0.351 – 0.906
Worked (Ref= No):						
Yes	1.876**	1.356 – 2.596				
Saved Regularly (Ref= No):						
Yes	1.509	0.374 – 6.084				
Work & Saving (Ref= No Work):						
Work + No Regular Saving			1.959**	1.410 – 2.721		
Work + Regular Saving			1.590	0.382 – 6.623		
Work/ Income*Saving (Ref=No Work)						
Lower Income[a] + No Regular Saving					1.505	0.865 – 2.618
Higher Income[a] + No Regular Saving					2.640*	1.302 – 5.354
Work + Regular Saving					1.613	0.389 – 6.689
Partner Trusts Her with Money (Ref=No):						
Yes	0.365*	0.158 – 0.841	0.367*	0.152 – 0.887	0.377*	0.149 – 0.953
Husband's Age	1.038	0.882 – 1.223	1.040	0.894 – 1.210	1.045	0.900 – 1.123
Husband Worked in Past Month: (Ref=No):						
Yes	1.022	0.427 – 2.447	0.946	0.404 – 2.213	0.983	0.420 – 2.302
Number of Children: (Ref=None):						
1	1.587	0.503 – 5.009	1.587	0.522 – 4.824	1.635	0.531 – 5.037
2+	2.027	0.637 – 6.449	2.000	0.672 – 5.954	2.052	0.648 – 6.501

***p < .001; **p < .01; *p < .05; †<0.10

[a] Lower income is defined as less than the median income of 3,001 Ksh (USD 35.4) and higher income is equal to or greater than this amount.