

CROSS SECTIONAL STUDY OF WOMEN EMPOWERMENT AND ITS INFLUENCE ON CHILD NUTRITIONAL STATUS IN CENTRAL ASIAN COUNTRIES

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Abstract

This research work focuses on the impact of women empowerment on nutritional status of children aged 0-59 months in Central Asian countries, namely Kyrgyzstan and Tajikistan. A cross-sectional data and Logistic regression technique is used to analyze the association of female empowerment with three dependent variables: stunting, wasting and underweight status of children. The results show that there is a strong and positive influence of women empowerment on their children's nutritional outcome while its influence is found to be insignificant on the wasting and underweight status of children in the Kyrgyz sample.

Key words: Women Empowerment, Child Nutritional Status, Stunted, Wasted, Underweight

Introduction

The concept of women's empowerment is instrumentally important in attaining positive developmental results and for the welfare of men, women and children. Therefore, countries try to maintain overall health status of the population by observing influencing factors on children's healthiness. In the Central Asian families, where patriarchal culture exists, the final say in decisions regarding main domains of household life, such as large or day-to-day family purchases, visits to family and friends, use of husband's earnings and women healthcare is mainly dominated by males. Thus, the aim of this research paper is to analyze and find out whether women empowerment, which is concluded as a marked positive factor in many empirical studies, affects children's healthiness under this condition. It is essential to identify that do countries increase their labor force participation and also stimulate economic growth by empowering females and sustaining good health outcomes of future generation. Finally, this paper examines the causal relationship between women's decision-making ability and children's health status in 2 Central Asian Countries and their total sample, namely Tajikistan and Kyrgyzstan utilizing cross sectional data conducted by Demographic and Health Survey (DHS).

Literature Review

The target to empower women in developing nations relies on the idea that social justice has always been an essential aspect of welfare and has been reinforced by the conclusion that a rise in women's decision making power relative to men's guarantees benefits on child's health (Hoddinott & Haddad, 1991; E. Duflo, 2000; Maitra, 2004; Ahmed and Laskar, 2017). As Desai and Johnson (2015) indicated that in households, where women play an important role in the final say in decisions, more proportion of family resources are devoted to children compared to families with females with less-decisive roles (Hannan, 2015; Ibrahim et al., 2015; Heshmati and Musonera, 2016). The supporting view comes from UNICEF (2019), according to which nutritional status of children is determined by the quality of caring, food security and the health environment quality.

One of the most common econometric technique employed by scholars is logistic estimation and the outcomes met is that the impact of women empowerment is greater for height-for-age (=long-term nutritional status) than for either vaccination status or child mortality rates. Supporting evidence comes from Smith (2003) and states that women's decision-making power improves their child's height-for-age and reduces mortality rate, even after education and wealth of women are controlled. These effects are found to be the strongest in Asian countries, while they are the weakest in sub-Saharan Africa, Latin America and the Caribbean (Schijven, 2006; Ibrahim et al. 2015). From another point of view, researchers came to a conclusion that women of older age-groups (35-49) take part more in decision making than females in younger age groups, although children of older women have the highest percentage (47.6%) of being stunted (Deutsch and Silber, 2017). As Ndaimani (2018), Kishor and Subaiya (2005) stated, well-educational background assures well-paid job opportunities, career progress and more rights for women, especially to make decisions on their children's nutrition, medical care and immunization status. In countries like Zimbabwe, Nigeria and India, females who are final decision makers usually have a financial muscle that enables them to pay for their and their children's daily expenses, such as health services, food intake and other expenditures.

According to a number of studies conducted by Ibrahim et al. (2015), Adjiwanou and Legrand (2014) and Desai and Johnson (2005), the immensity of community impacts far outweighs the immensity of individual impacts. Specifically, even if a woman is a final decision maker in the family, when living in a community where women are less-empowered, may find her power reduced. To exemplify, doctors claim a father's signature on a consent form before carrying serious procedures out on a child or woman

herself despite female's final say in several countries like India. Regarding previous studies on Indian women, it is summarized that they face a remarkable constraint regarding cash expenditure; half of them are not allowed to take their sick child to doctor without permission of husbands or parent-in-laws. In terms of household purchases, 70 per cent of women do not feel free to make decisions, which is the main indicator to be empowered (Kishor and Subaiya, 2000; Kritz et al., 2000; Visaria, 2012).

The country group of interest in this paper is Central Asia (CA), which is at the transition stage after Soviet Union and I will analyze the influence of women empowerment on their child well-being and see whether the effect is different among 2 CA countries since they have similar history, economic conditions, culture and traditions.

Methodology

In this research paper, cross sectional data and logistic estimation method is used for 2 Central Asian countries namely Kyrgyzstan and Tajikistan. For *Kyrgyzstan*, DHS survey for the year 2012 was conducted the Institute of Obstetrics and Pediatrics and Ministry of Health of the *Kyrgyz Republic* while the Statistical Agency under the President of the Republic of Tajikistan (SA) in collaboration with the Ministry of Health and Social Protection of Population (MOHSP) were responsible for Tajikistan 2017 DHS survey results.

Econometric Estimation

The measurement was conducted using Multiple Logistic Regression (MLR) technique due to its ease of interpretation and applicability to dichotomous outcomes. The general model used by several researchers such as Ibrahim et al. (2015), Hannan (2015), Shiwakoti et al. (2017), Ndaimani et al. (2018) and Shafiq et al. (2019) is as following:

$$\beta_0 + \beta_1 * X_1 + \beta_2 * X_2 + \dots + \beta_m * X_m + U$$

Where π is the probability of a child being stunted or wasted or immunized that can take a value of only 1 or 0, β_i are odds ratios associated with the reference category, x_i are independent variables and U is the unobserved factors. The β_i values reporting odds ratios are more preferable than the regression results reporting coefficients since they have more accurate, practical and better comprehensiveness behaviour during the interpretation. above, the error term of LPM has a binomial distribution that violates the normality assumption.

Results

The table in Appendix 1 illustrates descriptive statistics of the target variables.

The logistic regression results in Table 1 presents the influence of Empowerment and other control variables on child nutritional status among sampled women and their children in Kyrgyzstan, Tajikistan and total. Firstly, the target independent variable – women empowerment has the most economically significant impact on child well-being in total regression than it has for Tajikistan and Kyrgyzstan separately. Following this, it is statistically significant to conclude that higher prevalence of stunting is found among children of not empowered women in all three cases. Specifically, being a child of an empowered woman leads to the decreased odds of being stunted by a factor of 0.695 in 95 per cent confidence level in Kyrgyzstan, while it is almost 0.9 in Tajik and total cases at 10 and 5 percent significance levels respectively.

Stunting Status	Kyrgyzstan 2012	Tajikistan 2017	Total
Empowerment Status Not empowered (Ref)	0.695** [0.492, 0.979]	0.868* [0.736, 1.023]	0.863** [0.754, 0.987]
Education in years	0.946***[0.908, 0.986]	0.980 [0.953, 1.007]	0.967***[0.948, 0.987]
Marital Status Not married (Ref)	1.541 [0.905, 2.623]	1.142 [0.871, 1.149]	0.807 [0.581, 1.121]
Work Status Not working (Ref)	0.970 [0.752, 1.251]	1.235** [1.000, 1.526]	1.100 [0.941, 1.285]
Age Groups 15-19 (Ref)			
20-24	1.564 [0.652, 3.751]	2.190 [0.745, 6.434]	1.789* [0.898, 3.566]
25-29	2.517** [1.043, 6.074]	3.370** [1.141, 9.949]	2.859*** [1.431, 5.714]
30-34	3.473***[1.400, 8.614]	3.544**[1.183, 10.609]	3.432*** [1.696, 6.945]
35-39	3.417***[1.333, 8.754]	3.807** [1.241, 11.674]	3.602*** [1.747, 7.423]
40-44	4.467***[1.629,12.245]	5.060*** [1.570, 16.305]	4.592*** [2.140, 9.850]

45-49	2.256 [0.653, 7.795]	12.600***[3.020, 52.562]	4.518*** [1.781, 11.457]
Child Gender Female (Ref)	0.634***[0.530, 0.759]	0.881 [0.754, 1.028]	0.744***[0.663, 0.835]
Child Age in months	1.030***[1.026,1.033]	1.028*** [1.025, 1.031]	1.028***[1.026, 1.031]
Place of Residence Rural (Ref)	1.045 [0.752, 1.450]	1.199 [0.931, 1.546]	1.108 [0.914, 1.344]
Wealth Index Poorest (Ref)			
Poorer	1.203 [0.925, 1.565]	0.674***[0.530, 0.857]	0.881 [0.741, 1.048]
Middle	0.935 [0.714, 1.225]	0.527***[0.412, 0.675]	0.692*** [0.579, 0.827]
Richer	0.975 [0.721, 1.317]	0.497***[0.386, 0.640]	0.691*** [0.572, 0.836]
Richest	1.406 [0.928, 2.130]	0.527***[0.383, 0.723]	0.782** [0.614, 0.995]
Constant	1329.402*** [297.408, 5942.377]	17.442***[4.785, 63.577]	57.468***[22.735, 145.265]
Observations	3,975	5,507	9,482
Pseudo R-squared	0.1311	0.1036	0.1030

Table_1: Logistic Regression Results. Confidence Errors in brackets

***p<0.01, **p<0.05, *p<0.1

Mother's education, child gender, child age in months were also concluded as significantly contributing factors to determine the stunting status of a child. Regarding the wealth index of mothers, it is obvious and statistically significant in Tajik that households living in higher wealth categories had more empowered mothers and less malnourished children, as more expenditure and resources are available to satisfy children's nutritional requirement. The regression outcomes on child's stunting status revealed that for all three measures that the older the women get, the more stunted their children are and it is under 99% confidence interval. Lastly, variables, namely marital status and place of residence are concluded as not influencing factors on child stunting status and they are consistent in most cases. Women empowerment has expected

outcome, but Kyrgyz sample represents insignificant relationship with child wasting status. However, being an empowered mother in Tajikistan associates with having less wasted children with odds ratio being equal to 0.759 at 5% significance level.

It is worth mentioning that the target independent variable –empowerment status shows negative relationship with underweight status of children as it was expected. According to the logistic estimates, being an empowered mother associates with decreased odds of children to be underweight by a factor of 0.786 in Tajik and total samples.

With few exceptions, the findings of this study also revealed that if mothers are empowered, they have well-nourished children in all samples. However, it cannot be concluded that children, whose mothers participate in household decision-making process have more probability to have better WHZ and WAZ scores than those whose mothers do not make any household decisions in the Kyrgyz case.

Conclusion and Recommendations

This research work assessed the link between women empowerment and child nutritional status in Kyrgyzstan and Tajikistan using DHS dataset and Logistic Regression technique.

Overall, this study suggests that, in the interest of arising sustainable improvements in child nutritional outcomes, women's empowerment status in terms of decision-making ability should be considered in all interventions by the Central Asian governments as well as by international agencies.

Reference List

Ahmed, M. and Lascar, S. (2017). **Domestic Violence in Relation to Women Empowerment and Women Household Headship: A Case in Nigeria.** *Researchgate*. Available from https://www.researchgate.net/publication/321830888_Domestic_Violence_in_Relation_to_Women_Empowerment_and_Women_Household_Headship_A_Case_in_Nigeria [Accessed 15 March 2020].

Desai, S. and Johnson, K. (2015). WOMEN'S DECISIONMAKING AND CHILD HEALTH: FAMILIAL AND SOCIAL HIERARCHIES. *Semanticscholar*. Available from <https://pdfs.semanticscholar.org/32d4/04fc97e78eb23b8c598c66bf96c52c35e5dd.pdf> [Accessed 20 November 2019].

Deutsch, J. and Silber, J. (2017). Does Women's Empowerment affect the health of children? The case of Mozambique. *Wider*. Available from

<https://www.wider.unu.edu/sites/default/files/Publications/Working-paper/PDF/wp2017-211.pdf> [Accessed 20 November 2019].

Duflo, E. (2012). Women Empowerment and Economic Development. *Journal of Economic Literature*, 50 (4), 1051-1079. Available from <https://economics.mit.edu/files/7417> [Accessed 15 March 2020].

Hannan, A. (2015). The Association Between Women's Empowerment and Child Nutrition in Bangladesh. *Semanticscholar*. Available from <https://pdfs.semanticscholar.org/3e2b/dfb73ca2c71273b8ece858fd88a74dae5c7e.pdf> [Accessed 20 November 2019].

Heshmati, A. and Musonera, A. (2016). Measuring Women's Empowerment in Rwanda. *Ftp*. Available from <http://ftp.iza.org/dp10131.pdf> [Accessed 20 November 2019].

Hoddinott, J. and Haddad, L. (1991). Household Expenditures, Child Anthropometric Status and the Intrahousehold Division of Income: Evidence from the Cote d'Ivoire. *Researchgate*. Available from https://www.researchgate.net/publication/5073383_Household_Expenditures_Child_Anthropometric_Status_and_the_Intrahousehold_Division_of_Income_Evidence_from_the_Cote_d'Ivoire [Accessed 15 March 2020].

Ibrahim, A., Tripathi, S. and Kumar, A. (2015). The Effect of Women's Empowerment on Child Health Status: Study on two Developing Nations. *International Journal of Scientific and Research Publications*, 5 (4), 1-8. Available from <http://www.ijsrp.org/research-paper-0415/ijsrp-p4005.pdf> [Accessed 20 November 2019].

Kishor, S. and Subaiya, L. (2005). Household Decision Making as Empowerment: A Methodological View. *Demoscope*. Available from http://www.demoscope.ru/weekly/knigi/tours_2005/papers/iussp2005s51452.pdf [Accessed 16 March 2020].

Kritz, M. et al. (2000). The role of gender context in shaping reproductive behaviour in Nigeria. In: Presser H, Sen G, editors. *Female Empowerment and Demographic Processes: Moving Beyond Cairo*. Oxford University Press 36 (2), 239–260. Available from <https://iucat.iu.edu/iuk/4941041> [Accessed 18 March 2020].

Maitra, P. (2004). Parental bargaining, health inputs and child mortality in India. *Journal of Health Economics*, 23 (2004), 259-291. Available from <http://users.monash.edu.au/~maitra/JHE2005Maitra.pdf> [Accessed 15 March 2020].

Ndaimani, A., Mhlanga, M. and Dube-Mawerewere, V. (2018). *The Association between Women's Empowerment and Uptake of Child Health Services: A*

Demographic and Health Survey-Based Synthesis. USA: USAID from the American People. Available from <https://dhsprogram.com/pubs/pdf/WP139/WP139.pdf> [Accessed 20 November 2019].

Schijven, G. (2016). Women's empowerment; does it affect child nutritional status? *Edepot*. Available from <https://edepot.wur.nl/391737> [Accessed 22 February 2020].

Shafiq, A. et al. (2019). The Effect of "Women's Empowerment" on Child Nutritional Status in Pakistan. *NLM*. Available from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6888433/> [Accessed 20 March 2020].

Shiwakoti, R. et al. (2017). Women's Empowerment and Nutritional Status of their Children: A Community-based Study from Villages of Bhaktapur District, Nepal. *Researchgate*. Available from https://www.researchgate.net/publication/315373308_Women's_Empowerment_and_Nutritional_Status_of_their_Children_A_Communitybased_Study_from_Villages_of_Bhaktapur_District_Nepal [Accessed 15 March 2020].

Smith, H. (2003). Women's Empowerment and Social Context: Results from five Asian Countries. *Upenn*. Available from <http://swaf.pop.upenn.edu/sites/www.pop.upenn.edu/files/WomensEmpowerment2Jan2003.pdf> [Accessed 16 March 2020].

UNICEF (2019). Children, Food and Nutrition. *UNICEF*. Available from <https://www.unicef.org/media/60806/file/SOWC-2019.pdf> [Accessed 15 March 2020].

Visaria, L. (2012). Empowerment of Women and Its Impact on Population. *Researchgate*. Available from https://www.researchgate.net/publication/287410046_Empowerment_of_women_and_its_impact_on_population [Accessed 20 March 2020].

Appendix 1 – Descriptive statistics for all samples

Variable	Observation	Mean	Std. Dev.	Min	Max
Total					
<i>Stunting</i>	9,791	.16842	.3742579	0	1
<i>Wasting</i>	9,791	.0485139	.2148605	0	1

<i>Underweight</i>	9,791	.0551527	.2282897	0	1
<i>Empowerment Status</i>	9,791	.6372179	.4808273	0	1
<i>Education Level of Mother</i>	9,646	11.09786	2.917344	0	21
<i>Marital Status of Mother</i>	9,791	.971198	.1672581	0	1
<i>Age Groups of Mother</i>	9,791	3.248494	1.146136	1	7
<i>20-24</i>	9,791	.2728016	.4454224	0	1
<i>25-29</i>	9,791	.3667654	.4819463	0	1
<i>30-34</i>	9,791	.2024308	.4018321	0	1
<i>35-39</i>	9,791	.1012154	.3016291	0	1
<i>40-44</i>	9,791	.0384026	.192176	0	1
<i>45-49</i>	9,791	.0063323	.0793277	0	1
<i>Work Status of Mother</i>	9,791	.1761822	.3809946	0	1
<i>Gender of Child</i>	9,791	.5062813	.4999861	0	1
<i>Birth Order of Child</i>	9,791	2.380451	1.345739	1	12
<i>Age of Child in Months</i>	9,791	28.7415	16.87469	0	59
<i>Place of Residence</i>	9,791	.2968032	.4568724	0	1
<i>Wealth Index</i>	9,791	3.017363	1.407301	1	5
<i>Poorer</i>	9,791	.1953835	.3965159	0	1
<i>Middle</i>	9,791	.2051884	.4038599	0	1
<i>Richer</i>	9,791	.2041671	.4031123	0	1
<i>Richest</i>	9,791	.1997753	.3998518	0	1

КРОСС-СЕКЦИОННОЕ ИССЛЕДОВАНИЕ УЧАСТИЯ ЖЕНЩИН В СОЦИАЛЬНОЙ ЖИЗНИ И ЕЕ ВЛИЯНИЕ НА ПИТАТЕЛЬНЫЙ СТАТУС ДЕТЕЙ В СТРАНАХ ЦЕНТРАЛЬНОЙ АЗИИ

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Аннотация

Данное исследование фокусируется на влиянии участия женщин в социальной жизни на питательный статус детей в возрасте от 0 до 59 месяцев в странах

Центральной Азии, а именно в Кыргызстане и Таджикистане. Для анализа связи между участием женщин в социальной жизни и тремя зависимыми переменными: задержкой роста, истощением и дефицитом массы тела у детей используется кросс-секционные данные и метод логистической регрессии. Результаты показывают, что существует сильное и положительное влияние участия женщин в социальной жизни на питательные результаты их детей, в то время как это влияние оказалось незначительным на статус истощения и дефицита массы тела детей в выборке Кыргызстана.

Ключевые слова: Участие женщин, Питательный статус детей, Задержка роста, Истощение, Недовес

Markaziy Osiyo mamlakatlarida ayollarning kuchayishi va uning bolalar ovqatlanish holatiga ta'siri bo'yicha kesishma tadqiqot

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Toshkent Xalqaro Vestminster Universiteti O'qituvchi-Asistenti

Anotatsiya

Ushbu tadqiqot ishi, Markaziy Osiyo mamlakatlari, xususan Qirg'iziston va Tojikistonda, 0-59 oylik bolalarning ovqatlanish holatiga ayollarning kuchayishining ta'sirini o'rganadi. Kesishma ma'lumotlari va Logistik regressiya texnikasi yordamida ayollarning kuchayishi va uchta mustaqil o'zgaruvchilar, ya'ni bolalarning bo'yi pastligi, semizlik va kam ovqatlanish holatlari o'rtasidagi bog'liqlik tahlil qilinadi. Natijalar, ayollarning kuchayishining ularning bolalarining ovqatlanish holatiga kuchli va ijobiy ta'sirini ko'rsatadi, ammo bu ta'sir Qirg'iziston namunasida bolalarning semirish va kam ovqatlanish holatiga ahamiyatli bo'lmaganligini ko'rsatadi. **Kalit so'zlar:** Ayollarning kuchayishi, Bolalar ovqatlanish holati, Bo'yining pastligi, Semirish, Kam ovqatlanish.