UDDIN J., PhD, Department of Epidemiology
University of Alabama at Birmingham
Birmingham, AL 35233, USA
E-mail: jalal@uab.edu
ORCID 0000-0002-8337-3480

UDDIN H., MS, Department of Sociology
East West University
Aftabnagar, Dhaka-1212, Bangladesh
E-mail: helal@ewubd.edu
ORCID 0000-0002-0767-3174

RAHMAN M., MS, Department of Sociology
University of Dhaka
Dhaka-1000, Bangladesh
E-mail: mostafizur.r@hotmail.com
ORCID 0000-0001-9354-5613

ASSOCIATION OF WOMEN'S OCCUPATION WITH ACTUAL AND IDEAL NUMBER OF CHILDREN IN BANGLADESH: A CASE OF ROLE INCOMPATIBILITY

Most of the studies that focused on women's employment and fertility documented an inverse association between women's labor force participation and fertility, mostly in the context of developed countries. However, it remains unclear whether a similar association exists in lower-income and pro-natalist countries, where the cost of childcare is relatively cheaper. Given this gap in the literature, this study examines the associations of women's occupation with two outcomes of fertility-related behaviors — actual and ideal number of children in Bangladesh. The study used the 2014 Demographic and Health Survey (DHS) of Bangladesh. The analysis included 14,318 married women aged 18 years or older. Logistic regression

models were used to assess the associations of women's occupation with the actual and ideal number of children. In general, women's labor force participation is inversely associated with the actual and ideal number of children in Bangladesh. Compared to non-working women, women in the pro-fessional/skilled sector were more likely to have 2 or fewer living children (OR=1.35; 95 % CI=1.16-1.58) and 2 or fewer ideal number of children (OR=1.51; 95 % CI: 1.21-1.88) in the fully adjusted model. Further, the association significantly varies by the levels of exposure to mass media such that women in the professional/skilled sector have a higher probability of having 2 or fewer living children at the higher levels of mass media exposure. The findings have implications for the social and population policies of Bangladesh. Policymakers can promote income-generating activities and encourage women's participation in economic spheres, which have the potential to lower the fertility and control population growth at the national level.

Keywords: *women's occupation, actual and ideal number of children, role incompatibility, mass media.*

Introduction. Bangladesh is the seventh most populous country in the world, with a population of about 168.1 million [1]. Bangladesh has received considerable attention in the recent development literature as a surprising country for its spectacular improvements in population and social develop-ment sector among low-income countries with a similar level of per capita in-come [2, 3]. Much of this attention is due to its rapid demographic transitions over the last four decades. The total fertility rate rapidly declined - from about seven births per woman in the 1970s to near replacement level fertility in 2017 (TFR=2.3) [4].

Bangladesh has been implementing various policies for promoting women's empowerment and labor force participation. Some notable initiatives include the 7 th Five Year Plan (2016-2020) and Vision 2021 aligned with the Sustainable Development Goal (SDG) of gender equality and empowering women. With implementing these plans and policies, Bangladesh has been striving to improve women's access to education, health service, and formal and informal labor market opportunities [5, 6].

Women's social status and access to economic spheres have considerably increased in recent decades in Bangladesh. One of the most visible changes in women's lives has been an enormous growth in their participation in economically productive work, including mass employment in the export-oriented garment sector and private and public enterprises. Over the last two decades, female labor force participation in the formal economic sector has sharply increased from 14 % in 1990 to 55 % in 2015 [7]. Does such growth in labor force participation, and especially working in an off-farm occupation have implications for demographic outcomes?

The objective of the paper. The objective of the paper is to examine the association of women's occupation with two fertility-related behaviors — the actual and ideal number of children in Bangladesh.

Literature review. A large body of empirical research continues to report how women's entry into the formal labor force has implications for fertility-related behaviors and attitudes. Dynamic models of fertility have shown that women who are in the labor force are more likely to have births scheduled later in life and more likely to have fewer children compared to non-working women [8, 9]. Such an inverse association, especially in the context of industrially developed countries, reflects the incompatibility between working a full-time job and caring for children [10]. The wage employment demands a full commitment to productive work hours and requires workers to conform to time-bound and highly demanding work obligations. This inverse association may become more robust for working women when they face higher gender inequality in the domestic sphere and have limited structural resources for childcare (e.g., paid maternity leave and affordable day-care).

Studies in OECD countries have found two distinct patterns: an inverse relationship between fertility and employment persisted during the 1970s to the early 1980s; however, by the late 1980s, the direction of association has changed and became significantly positive [11, 12]. Further, research also reported bidirectional associations between female labor force participation and fertility. While women's employment status can determine the childbirth, the number and presence of children in the family may also determine women's labor supply [9, 13, 14]. For example, a study in Dakar has found a null association between wage employment and birth [15]. Women's wage employment status has a negative association with the desired number of children in China [16] and rural Senegal [17]. In contrast, a study analyzing a panel of 97 countries over the period 1960-2000 has shown that an additional birth can cut down a woman's labor supply by almost two years during her fertile years [18].

Relevance of the article. As women's entry into the labor force has been on the rise and fertility has been declining over the last four decades in Ban-gladesh, studying the empirical association between women's occupation and fertility-related outcomes is absolutely necessary.

The aim of the article and innovation character. Most of the studies that focused on women's employment and fertility documented an inverse association, mostly in the context of developed countries. However, it remains unclear whether a similar association exists in lower-income and pro-natalist countries, where the cost of child care is relatively cheaper, and a family-based support system makes it easier to combine childcare with formal work.

Given this gap in the literature, this study examines the associations of women's occupation with two outcomes of fertility-related behaviors — actual and ideal number of children in Bangladesh.

Analysis of recent research and publications. Bangladesh has witnessed a rapid decline in its fertility over the last few decades. According to the Bangladesh Bureau of Statistics report [19], the total fertility rate (TFR) declined from 5.2 in 1982, to 2.05 in 2018. The fertility rates differ by socioeconomic and geographic factors; for example, fertility tends to be higher among those with lower education and income, and rural areas have higher fertility than urban areas [20, 21]. Further, irrespective of the level of education, the total fertility rate remains to be higher among women living in rural areas than urban areas. In addition to socioeconomic status, birth intervals may potentially reduce the fertility rates in Bangladesh. Studies have shown that educated and employed women have more birth intervals than low-educated and unemployed individuals [22].

Bangladesh has made incredible success in reducing the fertility rate. Many underlying factors made it possible. For example, one of the significant programmatic factors has been the critical role of family planning messages through the mass media. In particular, mass media played a decisive role in disseminating the value of small families and increasing the uptake of publicly funded family planning services (e.g., modern contraceptive use and home visits by family welfare visitors) [20, 23]. Studies have documented that women with more exposure to mass media have longer birth intervals and fewer numbers of children. More importantly, working women, as they have more possession of and exposure to mass media, are more likely to have longer birth intervals than non-working women [24, 25]. Exposure to mass media also promotes husband-wife interactions for family planning, the value of keeping a small family, and discouraging early marriage [26]. Based on this evidence, we hypothesized that women who have more exposure to mass media are more likely to have lower levels of the actual and ideal number of children.

Data and methods. *Data.* We analyzed de-identified data from the 2014 Demographic and Health Survey (DHS) of Bangladesh. The DHS is a nationally representative population-level household survey conducted in almost 90 countries in the world. This survey collects demographic, fertility, mortality, healthcare use, and nutrition and immunization related information from eligible women (15—49 years old). Our analytic sample included 14,318 currently married women aged 18 years or older, with non-missing information on all variables used in the analysis. The DHS survey obtained informed consent before surveying with a standardized questionnaire.

Outcome variables. We analyzed two outcomes of interest: actual and ideal number of children. To assess the ideal number of children, the DHS asks women

with children, "If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?" The DHS asks women with no children at the time of the survey, "If you could choose exactly the number of children to have in your whole life, how many would that be?" Both questions yielded both numeric and non-numeric responses (e.g., as God decides). Our analysis is based on the numeric responses as non-numeric responses constitute a tiny percentage of the total sample. Based on the numeric response, we created a binary variable of whether the women have two or less ideal number of children. The actual number of children is a binary measure of whether women have two or less surviving children at the time of the survey.

Women's occupation. In this analysis, the key explanatory variable is women's occupation. Women's occupation was categorized as a) not currently working, b) jobs in agriculture (e.g., self-employed and employee), c) unskilled jobs (sales, household/domestic work, and unskilled manual jobs), d) Skilled/ professional jobs (professional/technical/managerial/service/skilled manual).

Covariates. Women's current age, highest years of education, place of residence (urban or rural), religion (Muslim or non-Muslim) were self-reported. Additionally, exposure to mass media was constructed.

Mass media exposure index. The mass media index consisted of the women's report of the frequency of exposure to the following three mass media in a typical week a) newspaper, b) radio, and c) television. In the index, women's responses of not using any of the media was coded 0, the response "less than once a week" was coded 1, the response "at least once a week" was coded 2. Finally, scores for each medium was summed up and the total scores ranged from 0 to 6.

Wealth index. The wealth index is a composite measure of the cumulative living standard of a household. The wealth index is calculated based on the dwelling characteristics and selected assets of households, including sanitation facilities, water access, bicycles, televisions, materials used for the construction of the house [27]. Using the principal component analysis, individual households were then placed on a continuous scale of relative wealth. Households are then categorized into five wealth quintiles. Wealth quintile is commonly used in demographic and health studies to compare the effect of wealth on nutrition, family planning, and maternal/child health outcomes [28].

Statistical analysis. First, we presented the sample characteristics using descriptive statistics. We then assessed the associations of women's occupation with the actual and ideal number of children using logistic regression analysis. We fitted three models with sequential adjustment for potential confounders. Model 1 adjusted for demographic factors, model 2 additionally adjusted for socioeconomic factors, and model 3 additionally adjusted for exposure to mass media, access to family planning, and contraceptive use. Finally, we examined

whether the associations of women's occupation with outcomes vary by the levels of exposure to mass media. The statistically significant interaction effects are presented as predicted probabilities using the Stata's margins command (Fig. 1). All analyses were conducted in Stata 15.1 (Stata Corp LP, College Station, TX). The regression analysis accounted for the complex survey design factors, includ-

Table 1. **Th e profi le of sample characteristics, BDHS 2014 (N = 14,318)**

Variables	N	Mean	SD	Min, Max	Percentage
Ideal number of children	14,318	2.21	0.69	0,9	
Number of living children	14,318	2.27	1.46	0,12	
Age	14,318	31.00	8.58	18,49	
Education	14,318	5.42	4.11	0,17	
Media	14,318	1.42	1.29	0,6	
Living children					
>2	5,330				37.23
≤2	8,988				62.77
Use of Modern Contraception					
No	5,709				39.87
Yes	8,609				60.13
Occupation					
Not working	9,545				66.66
Agriculture	2,188				15.28
Unskilled/Domestic	723				5.05
Professional/Service/Skilled	1,862				13
Place of residence					
Urban	4,899				34.22
Rural	9,419				65.78
Religion					
Non-Muslim	1,380				9.64
Muslim	12,938				90.36
Visited by family planning worker in past 6 months					
No	11,449				79.96
Yes	2,869				20.04
Wealth index					
Poorest	2,554				17.84
Poorer	2,694				18.82
Middle	2,896				20.23
Richer	3,040				21.23
Richest	3,134				21.89

No t e: Mean, and Standard Deviation (SD) for continuous variables, and percentage for categorical variables.
Source: Bangladesh Demographic and Health Survey 2014.

ing survey weights, clusters, and strata. We did a set of sensitivity analyses (not presented here), which assessed the associations of women's occupations with the count of the actual and ideal number of children using Poisson regression and found similar inverse associations as reported in our current analysis with the binary indicator of the outcomes.

Results. Table 1 presents the socio-demographic characteristics of the sample. The mean age of women aged between 18-49 was 31 years, with a standard deviation of 8.6. The mean ideal number of children was 2.2, with a standard de-

Table 2. **Odds ratios and 95% confidence intervals of having 2 or less living children**

Variables	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)
Occupation (Not working = Ref)			
Agriculture	0.93 (0.76-1.13)	1.14 (0.94-1.38)	1.19 (0.98-1.46)*
Unskilled/Domestic	0.85 (0.65-1.11)	1.16 (0.88-1.52)	1.25 (0.95-1.63)
Professional/Service/ Skilled	1.31 (1.11-1.55)***	1.26 (1.08-1.47)***	1.35 (1.16-1.58)***
Age	0.86 (0.85-0.86)***	0.86 (0.86-0.87)***	0.86 (0.85-0.86)***
Place of Residence (Urban = Ref)			
Rural	0.60 (0.52-0.69)***	0.84 (0.73-0.97)**	0.84 (0.73-0.98)**
Religion (Non-Muslim = Ref)			
Muslim	0.61 (0.48-0.78)***	0.57 (0.46-0.69)***	0.55 (0.45-0.67)***
Ideal number of children	0.45 (0.41-0.50)***	0.48 (0.44-0.53)***	0.46 (0.42-0.51)***
Wealth Index (Poorest = Ref)			
Poor		1.32 (1.11-1.58)***	1.32 (1.09-1.59)***
Middle		1.38 (1.14-1.68)***	1.27 (1.03-1.56)**
Richer		1.65 (1.36-2.00)***	1.42 (1.15-1.75)***
Richest		1.74 (1.40-2.17)***	1.41 (1.12-1.78)***
Years of education		1.13 (1.11-1.15)***	1.12 (1.10-1.14)***
Current use of modern contraception (No=Ref)			
Yes			0.44 (0.39-0.50)***
Media exposure index			1.14 (1.07-1.22)***
Visited by an FP worker (No = Ref)			1.00 (0.84-1.18)
Observations	14,318	14,318	14,318

N o t e: *** p < 0.01, ** p < 0.05, * p < 0.1.
Source: Bangladesh Demographic and Health Survey 2014.

viation of 0.7, while the mean number of living children was 2.3, with a standard deviation of 1.5. The average year of education was 5.4 years, and the average score in the media index was 1.4. About 37% of women had more than two children, while nearly 63% of them had two or fewer children. One-third (33.3%) of women reported having a job during the time of the survey. Among the working women, 15% were working in agriculture, 5% were working in unskilled/domestic, and 13% were working in professional/managerial sectors. Two-thirds of the sample (65.8%) were from rural and one-third (34.2%) were from an urban place of residence. About 90% of women were Muslim and almost 10% were non-Muslim. One-fifth women (20%) reported that a family planning worker visited them in the six months preceding the study.

Table 2 displays odds ratios (ORs) of having two or fewer living children. Model 1 included occupational categories (agricultural, unskilled/domestic,

Table 3. **Odds ratios and 95% confidence intervals of having 2 or less ideal number of children**

Variables	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)
Occupation (Not working=Ref)			
Agriculture	1.28 (1.06-1.55)**	1.33 (1.09-1.63)***	1.30 (1.06-1.59)**
Unskilled/Domestic	1.19 (0.91-1.57)	1.29 (0.98-1.70)*	1.23 (0.93-1.63)
Professional/Service/ Skilled	1.61 (1.29-1.99)***	1.60 (1.29-2.00)***	1.51 (1.21-1.88)***
Age	0.99 (0.98-1.00)***	0.99 (0.98-1.00)**	0.99 (0.98-1.00)
Number of living children	0.63 (0.60-0.66)***	0.65 (0.62-0.69)***	0.64 (0.60-0.68)***
Place of Residence (Urban=Ref)			
Rural	0.80 (0.68-0.95)**	0.85 (0.71-1.02)*	0.89 (0.74-1.07)
Religion (Non-Muslim =Ref)			
Muslim	0.75 (0.54-1.04)*	0.73 (0.53-1.01)*	0.77 (0.56-1.05)
Wealth Index (Poorest=Ref)			
Poor		1.10 (0.91-1.33)	1.06 (0.87-1.30)
Middle		1.15 (0.96-1.38)	1.06 (0.89-1.27)
Richer		1.10 (0.89-1.35)	1.00 (0.80-1.24)
Richest		1.11 (0.88-1.40)	0.97 (0.76-1.25)
Years of education		1.04 (1.02-1.06)***	1.03 (1.01-1.05)***
Current use of modern contraception (No=ref)			
Yes			1.51 (1.34-1.71)***
Media exposure index			1.09 (1.03-1.16)***
Visited by an FP worker (No=Ref)			1.05 (0.90-1.22)
Observations	14,318	14,318	14,318

Note: *** p < 0.01, ** p < 0.05, * p < 0.1.
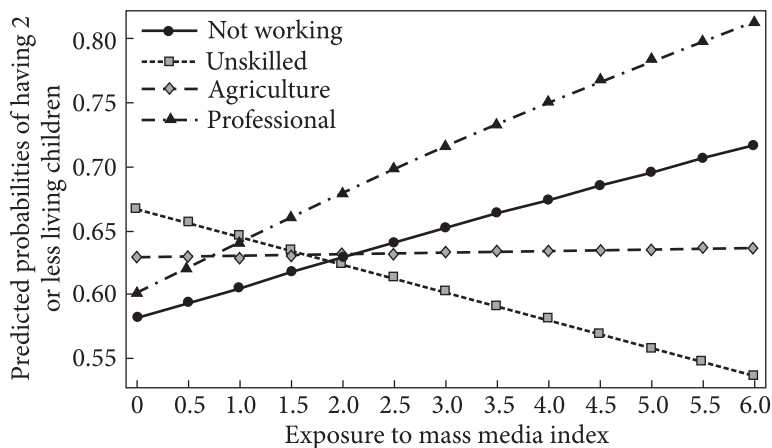*Source:* Bangladesh Demographic and Health Survey 2014.

Fig. 1. Predicted probabilities of having ≤2 living children by women's occupation and exposure to mass media index
Source: Bangladesh Demographic and Health Survey 2014.

and professional/managerial), age, place of residence, religion, and the ideal number of children. Women who were involved in the professional/managerial work were more likely to have two or fewer living children compared to those who were not working (OR = 1.31; 95 % CI = 1.11-1.55). In model 2, when further adjusted for socioeconomic characteristics, including wealth index and years of education, the association between occupation and having two or fewer living children remained significant with OR attenuated a bit (OR = 1.26, 95 % CI = 1.08-1.47). In model 3, we further adjusted for the use of modern contraception, access to mass media index, and whether a family planning worker visited the respondent. After adjusting for these factors, the association between professional occupation and the outcome became a bit stronger than the earlier model (OR = 1.35, 95 % CI = 1.16-1.58). Additionally, the association of agricultural jobs with the outcome became marginally significant (OR = 1.19, 95 % CI = 0.98-1.46).

Table 3 presents the odds ratios of having ≤2 ideal number of children. Model 1 included women's occupational categories, age, number of living children, place of residence, and religion. The results in model 1 show that women in professional/skilled job had higher odds (OR = 1.61, 95 % CI = 1.29-1.99) of having ≤2 ideal number of children compared to those who were not working. Women in agricultural jobs were also more likely (OR = 1.28, 95 % CI = 1.06-1.55) than those who were not working to have ≤2 ideal number of children. In model 2, when we further adjusted for wealth index and education, the strength of the association for professional women remained similar (OR = 1.60, 95 % CI = = 1.29-2.00) and the association for women in agriculture was a bit stronger (OR = 1.33, 95 % CI = 1.09-1.63) compared to model 1. Additionally, in model 2, unskilled women were more likely to have ≤2 ideal number of children (OR =

= 1.29, 95 % CI = 0.98-1.70). Lastly, when further adjusted for the use of modern contraception, media exposure index, and whether the respondent was visited by a family planning worker, the estimated association of professional job decreased to 1.51 (p<0.01) from 1.61 in Model 1 (Table 3), a reduction of about 10 %. Th e association of agricultural jobs remained relatively similar, while unskilled/domestic work became no longer signifi cantly diff erent than not working.

Figure 1 shows the predicted probabilities of having ≤2 living children by occupation and exposure to mass media index. Predicted probabilities show that women with a professional job have a higher probability of having ≤2 living children at the higher levels of exposure to mass media compared to women in other occupations (not working, unskilled, and agriculture). These probabilities highlight that mass media may have an amplifying effect on influencing women to have a smaller family, especially among those who are in professional jobs. This is likely because women in professional sectors are more likely to possess mass media (e.g., TV) and exposure to the media messages about family planning.

Discussion. The declining fertility has been a critical component in the recent demographic transition in many low-income countries, including Bangladesh. In particular, the achievement of the replacement level fertility has been a common population policy goal in many low-income and pro-natalist countries. Towards achieving this goal, the family planning programs in Bangladesh have long been publicizing the slogans "Boy or girl, two children are enough" and "One child is ideal" [29]. In line with these national family planning and population control policy goals, our analysis focused on examining the associations of women's occupation with the actual and ideal number of children at the replacement level.

In general, our analysis found strong evidence that women employed in professional/skilled and agricultural jobs had a higher likelihood of having both smaller actual and ideal number of children goals than those who were not working. The occupational differences in the outcomes remained significant even after adjustment for several demographic, socioeconomic, and demand and supply-side factors of family planning. The analysis also found that the strength of the association of women's occupation with having two or fewer number of children varies by the levels of exposure to mass media.

The analysis found that employed women, particularly in the professional job and agriculture, are more likely to have an actual and ideal number of children at the replacement level. We hypothesized that a full-time wage employment, in many ways, makes it harder for a woman to have a large number of children because of the underlying role incompatibility issue. The key to the role incompatibility is the perceived stress of combining participation in the labor force and the responsibilities of childcare [30]. Our findings provide evidence for the role incompatibility hypothesis as professional women are highly likely to have both actual and ideal number of children at the replacement level in the

fully adjusted models. Previous studies reported similar associations showing that women who have a professional job tend to have late and low birth [16, 17, 31, 32].

It is interesting to notice that much like women in professional/skilled jobs, women in agriculture were also more likely to have lower fertility norms. Although working on the farm, either as a wage laborer or an owner of the farm, arguably provides flexibility and time to combine childcare and farm work, changes in the farm structure may discourage women from desiring for higher fertility. In particular, the seemingly declining higher fertility norms among women in agriculture may be the indirect result of the reduced demand for household labor, especially child labor in agriculture. Over the past several decades, there has been a decline in average farm size, an increase in landlessness, and an increase in the mechanization of agriculture, all of which notably helped alter the high fertility norms in rural Bangladesh [33]. Additionally, women's entry into agricultural jobs can increase their social status and exert increased control over their reproductive life by potentially contributing to the household income and increasing their power in the household decision-making process [34]. Studies have shown that women who have higher levels of power in the family are better able to meet their contraceptive needs and control fertility [35-39].

We conceptualized that media exposure has a significant influence on creating awareness among women, particularly during pregnancy periods [40]. Previous studies showed that mass media had a considerable impact on reducing the rate of fertility by changing family planning behavior. Campaigns for family planning in mass media have been successful in Bangladesh [41, 42]. Studies argued that the implementation of a robust family planning program, along with the mass media campaign, has directly or indirectly helped controlling fertility behavior [43]. The use of modern contraception is shown to have a strong influence on determining the number of children born in India and Bangladesh [44], primarily as women in these countries use permanent methods after completing the desired number of kids [45].

The study's main strength is that it used a nationally representative sample, and the findings can be inferred to the national level. Despite this strenght, we acknowledge two major limitations. First, we were unable to control for some other confounding factors which may directly or indirectly influence the desire for actual and ideal number of children. For instance, the health condition of the study subjects, whether women live in an extended family, whether women have access to affordable childcare, and husband's/partner's characteristics are notable confounders that we could not control for in our regression model.

Second, we note that there is a bidirectional association between women's employment and fertility. That means, the number of children can also work as an independent variable and determine women's labor force participation.

Conclusion. Demographic patterns of fertility have changed significantly in the last four decades in Bangladesh. Our analysis has demonstrated that women who participate in the labor force, especially in the professional sector and agriculture, are more likely to attain the replacement or lower levels of fertility and limit the intention of large family size. In other words, these findings confirm that women's increased economic status is inversely associated with fertility-related behaviors. Such an inverse association has less frequently been reported in low-income and pro-natalist societies, where women's work is often combined with childcare. The existence of such an inverse association has implications for population policy in low-income countries. In particular, policymakers in population programs can promote income-generating activities and encourage women's participation in economic spheres, which have the potential to lower the fertility and control population growth. Progressive policies for women's economic empowerment, as outlined in the National Women Development Policy (NWDP) of 2011 in Bangladesh, will help the formulation of multisectoral programs for controlling population growth in general and achieving the fertility-related policy goals in particular. Most importantly, although NWDP has broadly set forth the policy goals for women's equal opportunities to health, education, and income-generating skill development programs, the formulation of a comprehensive national implementation strategy, in the light of the NWDP, is urgently required. Finally, the evidence found in our analysis implies that providing greater access to economic resources and education would not only benefit the economic welfare of the womenfolk but control the population growth in low-income settings such as Bangladesh.

REFERENCES

1. United Nations Population Fund (UNFPA). (2019). "*State of World Population 2019.*" New York: United Nations Population Fund.

2. Asadullah, M. Niaz, Antonio, Savoia, & Wahiduddin, Mahmud (2014). Paths to Development: Is There a Bangladesh Surprise? *World Development, 62,* 138-54.

3. Chowdhury, Ahmed M. R., Abbas Bhuiya, Mahbub E. Chowdhury, Sabrina Rasheed, Zakir Hussain, and Lincoln C. Chen. (2013). "The Bangladesh Paradox: Exceptional Health Achievement Despite Economic Poverty." *The Lancet,* 382(9906):1734–45.

4. National Institute of Population Research and Training (NIPORT), and ICF. (2019). "*Bangladesh Demographic and Health Survey 2017-18: Key Indicators.*" Dhaka, Bangladesh, and Rockville, Maryland, USA: NIPORT, and ICF.

5. Bangladesh Bureau of Statistics. (2015). "Report on Bangladesh Sample Vital Statistics 2014." BBS, Dhaka, Bangladesh.

6. Ministry of Women and Children Affairs. (2020). "Prime Minister Sheikh Hasina's Commitment Gender Equality and Women Empowerment." Ministry of Women and Children Affairs, Dhaka, Government of the People's Republic of Bangladesh.

7. Asian Development Bank. (2015). "*Women in the Workforce: An Unmet Potential in Asia and the Pacific.*" Mandaluyong City, Philippines: Asian Development Bank.

8. Becker, Gary S. (1960). "An Economic Analysis of Fertility, Demographic and Economic Change in Developed Countries: A Conference of the Universities." *National Bureau Committee for Economic Research,* 209-231.

9. Kalwij, Adriaan S. (2000). "The Effects of Female Employment Status on the Presence and Number of Children." *Journal of Population Economics,* 13(2):221–39.

10. Brewster, Karin L. and Ronald R. Rindfuss. (2000). "Fertility and Women's Employment in Industrialized Nations." *Annual Review of Sociology,* 26(1):271–96.

11. Ahn, Namkee and Pedro Mira. (2002). "A Note on the Changing Relationship between Fertility and Female Employment Rates in Developed Countries." *Journal of Population Economics,* 15(4):667–82.

12. Engelhardt, Henriette and Alexia Prskawetz. (2004). "On the Changing Correlation between Fertility and Female Employment over Space and Time." *European Journal of Population,* 20(1):35–62.

13. Heckman, James J. and Thomas E. MaCurdy. (1980). "A Life Cycle Model of Female Labour Supply." *The Review of Economic Studies,* 47(1):47–74.

14. Mroz, Thomas A. (1987). "The Sensitivity of an Empirical Model of Married Women's Hours of Work to Economic and Statistical Assumptions." *Econometrica: Journal of the Econometric Society,* 55(4):765–99.

15. Beguy, Donatien. (2009). "The Impact of Female Employment on Fertility in Dakar (Senegal) and Lome (Togo)." *Demographic Research,* 20:97–128.

16. Fang, Hai, Karen N. Eggleston, John A. Rizzo, and Richard J. Zeckhauser. (2013). "Jobs and Kids: Female Employment and Fertility in China." *IZA Journal of Labor & Development,* 2(1):12.

17. Van den Broeck, Goedele and Miet Maertens. (2015). "Female Employment Reduces Fertility in Rural Senegal." *PloS One,* 10(3):1–15.

18. Bloom, David E., David Canning, Günther Fink, and Jocelyn E. Finlay. (2009). "Fertility, Female Labor Force Participation, and the Demographic Dividend." *Journal of Economic Growth,* 14(2):79–101.

19. Bangladesh Bureau of Statistics. (2015). *"Fertility Differtials in Bangladesh: Trends and Determinants."* BBS, Dhaka, Bangladesh.

20. Hasan, Muhammad M., Mirajul Islam, Saifullah Sakib, and Iqramul Haq. (2018). "Influences of Proximate Determinates on Fertility among Urban and Rural Women in Bangladesh." *Dhaka University Journal of Science,* 66(1):49–54.

21. Islam, Sabina and Mossamet K. Nesa. (2009). "Fertility Transition in Bangladesh: The Role of Education." *Proceedings of the Pakistan Academy of Sciences,* 46(4):195–201.

22. Mohammad, Ahbab, Fazle Rabbi, Shamal C. Karmaker, Shahadat A. Mallick, and Sayema Sharmin. (2013). "Determinants of Birth Spacing and Effect of Birth Spacing on Fertility in Bangladesh." *Dhaka University Journal of Science,* 61(1):105–10

23. Abedin, Sumaiya. (2011). "Identification of Fertility Enhancing and Inhibiting Factors: A Study on Married Adolescents in Bangladesh." *Asian Social Science,* 7(5):191.

24. Ahammed, Benojir, Md R. Kabir, Md M. Abedin, Mohammad Ali, and Md A. Islam. (2019)."Determinants of Different Birth Intervals of Ever Married Women: Evidence from Bangladesh." *Clinical Epidemiology and Global Health ,*7(3):450–56.

25. Upadhyay, Ushma D. and Michelle J. Hindin. (2005). "Do Higher Status and More Autonomous Women Have Longer Birth Intervals?: Results from Cebu, Philippines." *Social Science & Medicine,* 60(11):2641–55.

26. Boulay, Marc, J. Douglas Storey, and Suruchi Sood. (2002). "Indirect Exposure to a Family Planning Mass Media Campaign in Nepal." *Journal of Health Communication,* 7(5):379–99.

27. Rutstein, Shea O. and Kiersten Johnson. (2004). *"The DHS Wealth Index. DHS Comparative Reports No. 6."* Calverton: ORC Macro.

28. Filmer, Deon and Lant H. Pritchett. (2001). "Estimating Wealth Effects without Expenditure Data—or Tears: An Application to Educational Enrollments in States of India." *Demography,* 38(1):115–32.

29. Begum, Hasna. (1993). "Family Planning and Social Position of Women." *Bioethics,* 7(2–3):218–23.

30. Mahmud, Simeen. (1988). "Exploring the Relationship between Women's Work and Fertility: The Bangladesh Context." *The Bangladesh Development Studies,* 16(4):99–113.

31. Kabir, M. Alamgir, Khan, M., Rahman, M., and Patwary, F. Karim. (2005). "Impact of Woman's Status on Fertility and Contraceptive Use in Bangladesh: Evidence from Bangladesh Demographic and Health Survey, 1999-2000." *Journal of Family Welfare,* 51(1):1-10.

32. Risse, Leonora. (2006). "Does Maternity Leave Encourage Higher Birth Rates?: An Analysis of the Australian Labour Force." *Australian Journal of Labour Economics,* 9(4):343

33. Barkat-e-Khuda, Md, R. Haque, Mohammad S. Hasan, Nurul Alam, and Samiha Barkat. (2018). "Fertility Preferences in Bangladesh." *Family Demography in Asia: A Comparative Analysis of Fertility Preferences,* 3:30-51.

34. Khandker, Shahidur R. (1985). "Women's Role in Household Productive Activities and Fertility in Bangladesh." *Center Discussion Paper,* 488. Yale University, New Haven, CT.

35. Doepke, Matthias and Michèle Tertilt. (2018). "Women's Empowerment, the Gender Gap in Desired Fertility, and Fertility Outcomes in Developing Countries." *AEA Papers and Proceedings,* 108:358-362.

36. Rahman, M. Mosfequr, Md G. Mostofa, and Md A. Hoque. (2014). "Women's Household Decision-Making Autonomy and Contraceptive Behavior among Bangladeshi Women." *Sexual & Reproductive Healthcare,* 5(1):9–15.

37. Uddin, Jalal, Muhammad Z. Hossin, and Mohammad H. Pulok. (2017). "Couple's Concordance and Discordance in Household Decision-Making and Married Women's Use of Modern Contraceptives in Bangladesh." *BMC Women's Health,* 17(1):1–10.

38. Uddin, Jalal, Mohammad H. Pulok, and Md Nasim-Us Sabah. (2016). "Correlates of Unmet Need for Contraception in Bangladesh: Does Couples' Concordance in Household Decision Making Matter?" *Contraception,* 94(1):18–26.

39. Upadhyay, Ushma D. and Deborah Karasek. (2012). "Women's Empowerment and Ideal Family Size: An Examination of DHS Empowerment Measures in Sub-Saharan Africa." *International Perspectives on Sexual and Reproductive Health,* 38(2):78–89.

40. Rahman, M. Shafiqur. (2007). "Socioeconomic Disparities in Health, Nutrition, and Population in Bangladesh: Do Education and Exposure to Media Reduce It." *Pakistan Journal of Nutrition,* 6(3):286–93.

41. Islam, M. Mazharul and Saidul Hasan. (2000). "Mass Media Exposure and Its Impact on Family Planning in Bangladesh." *Journal of Biosocial Science,* 32(4):513–26.

42. Kabir, M. and Islam, M. Amirul. (2000). "The Impact of Mass Media Family Planning Programmes on Current Use of Contraception in Urban Bangladesh." *Journal of Biosocial Science,* 32(3):411–19.

43. Kulkarni, Manojkumar S. (2003). "Exposure to Mass Media and Its Impact on the Use of Family Planning Methods by Women in Goa." *Health and Population- Perspectives and Issues,* 26(2):87–93.

44. Bryant, John. (2007). "Theories of Fertility Decline and the Evidence from Development Indicators." *Population and Development Review,* 33(1):101–27.

45. Dev, S. Mahendra, James, K., and Sen, B. (2002). "Causes of Fertility Decline in India and Bangladesh: Role of Community." E*conomic and Political Weekly,* 37(43):4447–54.

Д. Юддін, кандидат наук, кафедра епідеміології
Університет Алабами в Бірмінгемі
Бірмінгем, AL 35233, USA
E-mail: jalal@uab.edu
ORCID 0000-0002-8337-3480

Х. Юддін, MS, кафедра соціології
Східно-західний університет
Афтабнагар, Дака-1212, Бангладеш
E-mail: helal@ewubd.edu
ORCID 0000-0002-0767-3174

М. Рахман, MS, кафедра соціології
Університет Дака
Дака-1000, Бангладеш
E-mail: mostafizur.r@hotmail.com
ORCID 0000-0001-9354-5613

ЗВ'ЯЗОК ЖІНОЧОЇ ЗАЙНЯТОСТІ З АКТУАЛЬНОЮ ТА ІДЕАЛЬНОЮ КІЛЬКІСТЮ ДІТЕЙ В БАНГЛАДЕШ: ПРИКЛАД ФУНКЦІОНАЛЬНОЇ НЕМОЖЛИВОСТІ

Обернений зв'язок між працевлаштуванням жінок і народжуваністю є предметом постійної уваги фахівців у розвинених країнах. Водночас існування подібного зв'язку у країнах із низьким рівнем доходу і пронаталістичних країнах, де вартість догляду за дітьми нижча, практично не досліджено. Мета цього дослідження — вивчити зв'язок жіночої зайнятості з двома моделями поведінки, пов'язаної із народжуваністю, а саме з фактичною та ідеальною кількістю дітей у родині у Бангладеш. Ураховуючи вказаний розрив у відомих на сьогодні опублікованих результатах спеціалізованих досліджень, ми зосередили зусилля на вивченні залежності між фертильністю і зайнятістю, спираючись на встановлення розбіжностей між реальною і бажаною кількістю дітей за різних моделей жіночої поведінки, спираючись на результати демографічного опитування та обстеження стану здоров'я (*Demographic and Health Survey, DHS*) Бангладеш 2014 року. Під час цього обстеження було опитано 14 318 одружених жінок віком від 18 років. Для оцінювання зв'язку зайнятості жінок із фактичною та бажаною кількістю дітей у них ми використали логістичні регресійні моделі. У результаті з'ясовано, що

загалом у Бангладеш, як і у розвинених країнах, зв'язок жіночої зайнятості із реальною кількістю дітей є оберненим. На відміну від жінок, які не працюють, професійно зайняті на кваліфікованій роботі жінки частіше мають двох або менше живих дітей (показник нерівномірності (*Odd Ratio*) OR = 1,35; 95 % довірчий інтервал (*Confidence Interval*) CI — 1,16—1,58) і двох або менше від бажаної кількості дітей (*OR* = 1,51; 95 % *CI* — 1,21—1,88) у повністю відрегульованій моделі. Однак зв'язок цей суттєво змінюється залежно від показника масмедіа (частоти перегляду газет, радіо та телебачення за типовий тиждень): жінки, професійно зайняті у кваліфікованому секторі, мають більшу ймовірність мати двох або менше живих дітей за вищого показника масмедіа. Отримані результати можуть бути застосовані для розвитку соціальної політики Бангладеш. Політики можуть сприяти діяльності, що приносить дохід, і заохочувати жінок до участі в економічних сферах, вплинувши таким чином на зниження народжуваності та контролюючи зростання населення на національному рівні.

Ключові слова: заняття жінок, фактична та бажана кількість дітей, функціональна неможливість.