Maternal Mental Health and Labour Market Outcomes in Ibadan, Nigeria

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Extended Abstract

The growing presence of women in the labour market, especially in their prime working age, has been a topic of global research interest (Komodroumou, 2018; Querejeta and Bucheli, 2021). There has been an increase in female labour force participation and a decline in the male participation (WDI, 2019). Worldwide, mental health disorders have become increasingly prevalent (Menta, *et al.,* 2021). Depression, which is one of the most common of these disorders, has become a focus of research across countries of the world, with more occurrence among women and in developing countries (Norhayati, et al., 2015). Asides the exposure to general depression, women of reproductive are predisposed to depression during pregnancy (antenatal depression) and/or after delivery (postpartum depression) (Abdollahi, et al., 2016; Costa-Font, et al., 2020). This was further heightened with the emergence of the COVID-19 pandemic (Olaniyan, et al., 2020; 2021).

A number of factors such as the role of technology, increased female education which delays marriage and childbearing, prevailing economic condition in Nigeria, further heightened by the COVID-19 pandemic (Olaniyan, et al., 2021) and the high opportunity cost to the woman of being involved in unpaid care work all account for this role reversal. In spite of this, culturally, the Nigerian society perceived the woman as a primary care giver and the man as the primary earner. The changing economic environment has resulted in an increased prevalence in dual-earner couples globally, which has increased female LFP (Sambt et al., 2016) and also resulted in rapid increase in the number of mothers who chose to be in employment even after delivery. Interestingly, these period of active engagement in the labour market also largely coincide with the reproductive years of these women.

Earlier studies in Nigeria laid emphasis on either maternal mental health or female LMOs separately without focusing on their interdependence. Some studies also examined the prevalence, risk factors (Abiodun 2006) and healthcare seeking behaviour (Odufuwa, et al., 2022) of women with various mental illnesses. The most common of these illnesses is postpartum

depression, which is the focus of this study. This paper therefore examined the prevalence and impact of PPD on labour market outcomes among women in the study area.

This study, which examines the relationship between mental health and labour market outcomes is hinged on the Standard Labour Supply Theory (Ratzel, 2009). The theory is based on a number of assumptions. One of such is that an individual maximises utility subject to some given constraints. The theoretical framework is also based on the assumptions that individuals have a choice between work and leisure.

Following the above theoretical framework, the mental health status of women is proxied using postpartum depression. Three measures of labour market outcomes are adopted: employment, number of hours worked per month and earned income per month. The general estimating equation is:

$$(LMO_i) = f(X_i B + X_i a + e_i) \qquad (****)$$

Where LMO_i which is the labour market outcome of interest for individual 'i' is a vector of variables including the demographic variables, household factors and observed mental health status of the women. The mother's employment status is measured as a dichotomous measure wherein the individual woman is either employed or unemployed. The model specification is stated below:

$$\Pr(EMP_i) = f(MHI_i\ age, education, family\ structure\ HHS_i) \qquad (1a)$$

$$\Pr(EMP)_i = a_1 + a_2 PPD_i + a_3 X_i + u_i \ldots\ldots\ldots\ldots\ldots \qquad (1b)$$

Equations 1a and 1b present the simplest form of the employment function for each postpartum woman. The probability of being employed ($\Pr(EMPi)$) which is the outcome variable is determined by her mental health as measured by her mental health index (MHI), age, level of education, religion, family structure, parity (number of livebirths) and household size. The MHI_i is measured in two forms. The first is a discrete measure using the continuous value of the EPDS to identify the incidence of PPD among the affected women. The second is the ordered categorisation of the EPDS which depicts the severity of PPD.

The second measure of the LMOs: the number of hours worked per month is measured as a continuous variable:

$$\log(hrs\ workdepermth) = f(MHI_i, IWC_i, HHS_i, LMC_i) \qquad (2a)$$

The third LMO is the monthly earned income which is specified as a function of Mental Health following the tradition established by Jacob Mincer is considered thus:

$$\ln Y_i = f(MHI_i, IWC_i, HHC_i, LMC_i, \log(totalexp)) \ldots\ldots\ldots\ldots\ldots\ldots \qquad (3a)$$

$$\ln earnedIncome_i = B_1 + B_2 X_i + u_i \ldots\ldots\ldots\ldots\ldots\ldots \qquad (3b)$$

The probability of being employed ($\Pr(EMP_i)$) is estimated as a function of the incidence or severity of mental illness, individual woman, household and labour market characteristics and is

estimated using probit regression while the hours worked are earnings were estimated using the Ordinary Least Square (OLS) Method.

The data used for this study was through a survey conducted using structured questionnaires. A facility-based survey was conducted among mothers with babies below 18 months, attending postnatal and immunization clinics in Ibadan, the capital of Oyo State, Nigeria. The choice of mothers with children below 18 months is due to the proposition that there are cases of PPD which present at birth and extend beyond the first year of birth (Chinawa, 2016). Participants were contacted at the clinics and were invited to participate in the study by filling out the questionnaires with the aid of the research team.

A three-stage sampling technique was employed. The first stage was a stratified sampling to disaggregate the health facilities offering postnatal and immunization services, on the basis on ownership, into public and private healthcare providers. Free immunization services are provided in public healthcare facilities in the country, while private facilities provide paid immunization services which extends from birth to beyond 18 months. In the second stage, seven healthcare facilities comprising of three (3) private and four (4) public healthcare facilities were purposively selected based on clinics with the highest number of attendees (patronage). The final stage was a random selection of 390 women whose children were between 2 weeks and 18 months, across the seven (7) healthcare facilities, based on willingness to participate in the study.

The main finding of the study reveals a PPD prevalence rate of 20.8 percent was observed among the sampled women. The labour market consequence of severe PPD was observed to have a negative impact on LMOs, specifically employment. A negative relationship was observable such that the more severe the depression is, the lower the probability of getting employed. Thus, it is important to ensure prompt treatment of that can reduce the severity of PPD among women. Finally, the impact of PPD on LMOs was considered with specific focus on employment. It was observed that: PPD reduced the probability of being employed but had no effect on other labour market outcomes (number of hours worked and income). This implies that while severe mental illness inhibits employment opportunities for the women, employers placed less emphasis on their on-the-job mental health status.

Severity, rather than incidence of postpartum depression, reduced the likelihood of female employability. The paper therefore recommends that employers of labour, both private and public should pay more attention to the mental health status of women. Government, at all levels, should also prioritise treatment of postpartum depression towards increasing the likelihood of women employment. Prompt diagnosis and treatment of PPD among women of reproductive age is highly recommended.

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