



Women's Participation in Labor Force in Sub-Saharan Africa (SSA): A Review of Determinants and Impacts

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Authors' contributions

This work was carried out in collaboration between both authors. Author VMEG worked out the study conception, design, and synthesis of the selected articles. Author NRG contributed to the discussion and review of the draft manuscript. Both authors read and approved the final manuscript.

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ABSTRACT

Background: In the last few decades, there has been a significant increase in women's participation in gainful employment in Sub-Saharan Africa (SSA). This scoping review has primarily aimed at assessing the key determinants and effects of women's involvement in the labor force in SSA.

Methods: The authors did the review based on 19 articles selected from PubMed and goggle search. The selection considered only those published in the last 15 years, conducted based on large sample from Sub-Saharan African countries, and those exclusively related to women's Labor Force Participation (LFP). More than 80% of the reviewed studies (16 of the 19) employed a cross-sectional study design with quantitative approaches.

Results: The review witnessed that women's labor force participation in SSA is determined by various individual, household, and community characteristics. Women with lower fertility, living in poor economic condition (low wealth quantiles), and those with above primary education were more likely to participate in gainful employment. Other demographic factors explaining why some

women participate in the labor force more often than others include women's age, marital status, number of under-five children, household size, and headship. Among the community variables, living in areas with better infrastructure (transport and communication) increased the likelihood of women's participation in gainful employment. Nearly all studies showed significant positive impacts of women's labor force participation on several domains of women's life and household well-being, such as on women's nutrition, childcare, and health service utilization.

Conclusion: The review implies that despite concerns about some adverse impacts of women's participation in gainful employment (such as on childcare), most of the studies indicated positive effects of LFP on women's and children's health, nutrition, and overall household well-being in SSA.

Keywords: DHS; empowerment; labor force participation; Sub-Saharan Africa.

ABBREVIATIONS

AOR : Adjusted Odds Ratio

DHS : Demographic and Health Survey (DHS).

SES : Socioeconomic Status

SDGs: Sustainable Development Goals

WHO : World Health Organization

1. BACKGROUND

Women constitute about half of any country's population. However, in most countries, they contribute much less than men in labor force participation (gainful employment)[1]. This is attributed to a wide range of factors, including traditional and cultural beliefs, educational background, age, marital status, residence, household and community factors [2,3,4]. Thus, one of the critical issues that have attracted global attention today is the low, but increasing, labor force participation of women. The full inclusion of women into the economy has become one of the most significant development challenges. In this regard, equity and efficiency, significantly eliminating inequalities in labor force participation, are desirable goals [5].

Empirical studies show that women who have access to economic resources make a substantial investment in their children's nutrition, education, and preventative healthcare [6]. Similarly, women's labor force participation has been vital in reducing fertility and child mortality [7]. Women's participation in the labor force is more important in Africa, where women are more dynamic economic driving force than anywhere else on the earth. Women contribute significantly to Africa's agricultural activities [8]. Even though more opportunities are available to women to enter the labor force, their participation is restricted to some occupations. They are usually limited in getting access to managerial jobs and wrestling with maternity decisions and family tradeoffs [9]. This review paper aims to examine

the determinants of women's participation in the labor force and selected impacts on household livelihoods in Sub-Saharan Africa. Understanding these determinants and effects could be an essential input to program planning, monitoring, and evaluations.

2. METHODS

2.1 Source of Information

This scoping review was done based on selected recent articles published in peer review journals. The search was done using the electronic databases (PubMed and Google scholar).

2.2 Search Strategy and Data Extraction

The searching and locating relevant studies considered five keywords: women's participation, labor force, household, livelihoods, and sub-Saharan Africa. The extraction strategy of the articles is presented in Fig. 1. In the first round of searching, 132 publications were extracted from PubMed and Google Scholar. The total number of items retained after removing duplicates was only 44. The second stage of selection and extraction involved screening titles and abstracts for relevance, scope, and study approaches employed by the individual studies. At this stage, 25 published materials were excluded. The inclusion of the final sets of publications considered three essential criteria: studies conducted in Sub-Saharan African countries based on reasonably large data, articles published in the last fifteen years, and mainly addressing women's participation in the labor force. Finally, 19 articles were included for review. As the main objective was not estimating the prevalence of LFP, we did not assess the quality of articles included in the review.

2.3 Summary of Study Designs

In most of the selected studies, married women of reproductive age (15-49) were used as respondents. The sample size of each survey was determined using one of the probability sampling methods. Most studies used a survey questionnaire as their primary data collection instrument. Issues included were socio-demographic characteristics, maternal characteristics, autonomy, and decision parameters. The definition of women's economic empowerment (labor force participation) slightly varied from one setting to another.

In more than 95% of the reviewed studies, quantitative approaches have been used. Sixteen of the nineteen articles employed cross-sectional study designs. While most of them drawn data from a specific country, two of them employed multi-country analysis.

2.4 Strategy for the Synthesis

The synthesis has primarily focused on two aspects: assessing the major determinants of LFP, and effects of women's employment on women, children, and overall household livelihood.

3. RESULTS

Table 2 presents the outcome variables, explanatory variables, and the main conclusion drawn from each study. It is noted that labor force participation appeared to be an outcome variable in about half of the studies. In the remaining half of the studies, labor force participation was used as an explanatory variable along with other control variables.

4. DISCUSSION

The study aims to review studies conducted in Sub-Saharan Africa (SSA), focusing on the determinants of women's participation in the labour force and impacts on household/women's well-being across various parameters. Although slight variations existed in methodology (such as labeling the outcome variables), the reviewed studies' findings reported one or more factors associated with women's participation in the labor force. The factors identified by individual studies differ in magnitude and direction of influences.

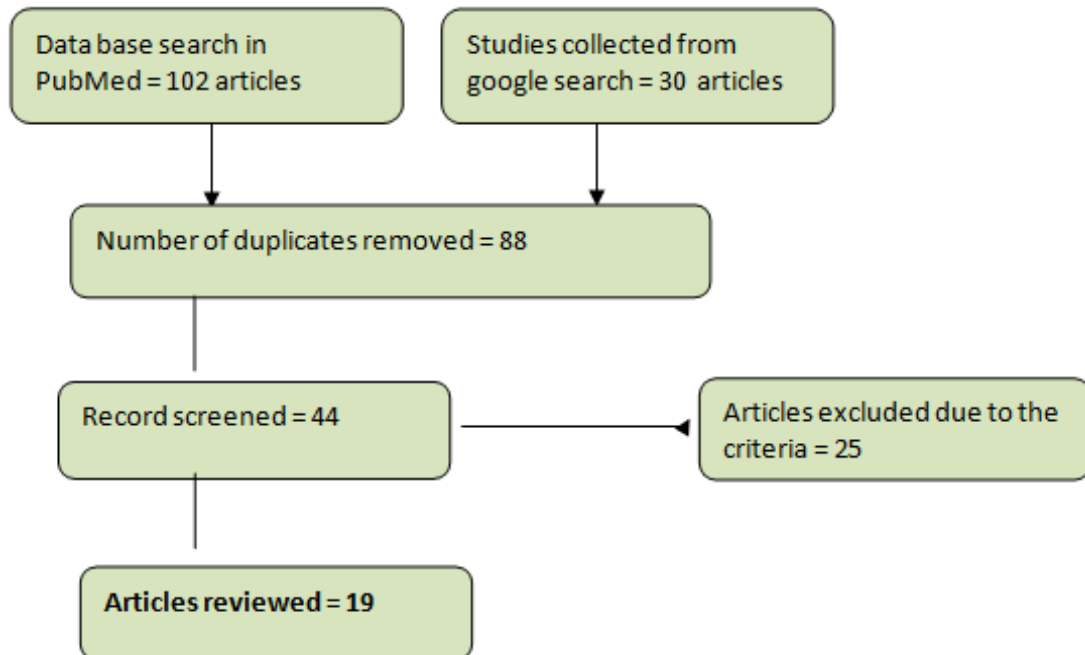


Fig. 1. Schema for article search

Table 1. Summary of sampling and study designs for each selected study

Study	Country	Approaches	Design	Sample (n)	Data and year
Gebreyes, [10]	Ethiopia	Qualitative	Cross-sectional	390 women of reproductive age (15-49)	Central Statistical Agency (CSA), 2011
Che and Sundjo, [11]	Cameroon	Quantitative	Cross-sectional	15,426 women of age (15-59)	Cameroon Demographic Health Survey By Multi Indicator Cluster Statistic (CDHS-MICS), 2011
Iweagu et al., [12]	Nigeria	Quantitative	Cross-sectional	774 local government in Nigeria	Household Survey Employment Data, 2010/11
Ackah et al., [3]	Ghana	Quantitative	Cross-sectional	5,271 and 10,294 individuals from GLSS3 and GLSS5 respectively.	Ghana Living Standards Survey (GLSS) 1991/92 & 2005/6
Sacky, [14]	Ghana	Quantitative	Cross-sectional	5, 612 females aged 15 yrs and above	Ghana Living Standards Survey (GLSS4), 1998/99
Abena et al., [15]	Ghana	Quantitative	Cross-sectional	555,879 females aged 15 yrs and older	Ghana Population Housing Census, 2010
Nwokoye, [16]	Nigeria	Quantitative	Cross-sectional	687 respondents	Survey Methods, 1990
Tingum, [17]	Cameroon	Quantitative	Longitudinal (panel data)	17, 247 females aged 15-65 years	Survey on Employment and Informal Sector (EESI 2)
Olowa and Adeoti, [18]	Nigeria	Quantitative	Cross-sectional	70 374 women	National Living Standard Survey (NLSS), 2009/2010
Clark et al., [19]	Nairobi Kenya	Quantitative	Cross-sectional	1,222 mothers of children under 1 to 3 years	Nairobi Urban Health and Demographic Surveillance System (NUHDSS), 2015
Waterhouse et al., [20]	Ghana	Quantitative	Longitudinal	697 Women of reproductive (aged 18–49)	Women's Health Study for Accra (WHSa –I and WHSA-II), 2003 and

Study	Country	Approaches	Design	Sample (n)	Data and year
Zereyesus et al. [21]	Ghana	Quantitative	Cross-sectional	1,393 women of reproductive age less than 50 years of age	2008/9 Multiple Indicators Multiple Causes (MIMIC), 2017
Verney et al., [22]	Ethiopia	Quantitative	Cross-sectional	Ethiopia (1,969) Senegal (1,925) Kenya (682)	Baseline survey Ethiopia, 2013 Senegal, 2014 Kenya, 2013
Adebowale et al. [23]	Burkina Faso Congo	Quantitative	Cross-sectional	married women aged 15 to 24 Burkina Faso (2,939) Congo (1,294) women of reproductive-aged 15 - 49 years	NDHS 2007
Manziona et al., [24]	Tanzania	Quantitative	Cross-sectional	5,000 female primary caregivers of children age 0 to 23 months	DHS 2015-2016
Komatsu et al. [25]	Tanzania	Quantitative	Longitudinal	2008/9, 3,265; household 2010/11, 3,786; household 2012/13, 5,010; household (age 20-65) respectively	National Panel Survey (NPS, 2008-2013)
Lan and Tavrow, [26]	22 Sub-Saharan African Countries and 22 non-African Countries.	Quantitative	Cross-sectional	Total of 44 countries, involved in the study consists of 22 Sub-Saharan Africa countries and 22 from non-African Countries	Global Gender Gap Index (GGI), 2012 Gender Equity Index (GEI), 2012 Social Institutions and Gender Index (SIGI), 2012
Vyas & Heise, [27]	Tanzania	Quantitative	Cross-sectional	5,688 women age 15-49 year 2,139 males	TDHS, 2009/10 National Bureau of statistics (NBS) Tanzania and ICF Macro, 2011
Nordang et al. [28]	Tanzania	Quantitative	Cross-sectional	152 children under five years of age and caregivers	TDHS, 2004/2005

Table 2. Summary of reported findings by the individual studies

Study	Outcome variable	Explanatory variables	Reported findings/ conclusion made
Gebreyes, [10]	Labour force participation	Explanatory variables: Including age, marital status, educational status, fertility (number of children less than five years), and relation to the household head, migration status, husband's educational status and Religion.	Age, marital status, educational status, presence of young children, household size and relationship to the household significantly determine female labour force participations [10].
Che and Sundjo, [11]	Female labour force participation	Explanatory variables: Including education, mother, number of females, husband working, marital status, children under five, religion, and ethnicity, etc.	The study revealed that most females with the necessary education level worked in most of the service sectors [11].
Iweagu et al., [12]	Female labour force participation	Explanatory variables are age, marital status, religion, household size, literacy rate, poverty rate, and per capita income.	The study revealed that female labor participation determinants in rural areas are primarily marital status, religion, per capita income; the poverty rate is a significant determinant in the rural area, whereas in urban areas is literacy rate and age [12].
Ackah et al., [3]	Major Labour force equations	Explanatory individual and household variables include educational, achievements, marital status, no. of children of school age and religion.	The finding confirms that a strong correlation between education primarily, after completing basic primary, school education and labour force participation [3].
Sackey, [14]	Labor Force Participation (employment choice)	Employment variables include work, occupation, nature of remuneration, and the primary domain characteristics.	The study showed that female education had strong and significant association with LFP in both urban and rural areas [14].
Abena et al., [15]	Labor force participation	Explanatory variables; Including individual and household characteristics such as marital status, age, number of children, ethnicity, region, and area of residence.	The result showed that having the necessary educational achievement increases female participation in the labour force [15].
Nwokoye, [16]	Female labor force participation	Explanatory variables include age, wage rate, educational achievement, and safety.	The finding showed that educational attainment, age, and wage rate were significant determinants of female labour force participation [16].
Tingum, [17]	Women working, categorized by sectors.	Explanatory variables used as follows: age, age squared residence, marital status, household size, education, and household head	The findings reveal that the more educated women are, the more likely they are to participate in the labour market [17].
Olowa and	Women labor	Explanatory variables: Including marital status,	Educational attainment levels significantly affect Women

Study	Outcome variable	Explanatory variables	Reported findings/ conclusion made
Adeoti, [18]	market participation	age, number of children, mother's and father's educational level, health status and geopolitical zones. .	Labour Market Participation (WLMP). Age had a non-linear effect on women labor force participation, increasing at first and then decreasing later in life. Marital status, Father's education, mother's education and land size and Geopolitical zones are all positively associated. On the other hand, numbers of children and health status have negative effect on women labor participation [18].
Clark et al., [19]	Women's labor market (three income-generating activities in the last month)	Control variables: Including mother and household characteristics, mother's age, education, ethnicity, pregnancy, presence of children under five years of age, female older than ten years living in the household, and mother moved to study site in the last five years.	This study linked women's economic and maternal roles to adverse health outcomes [19].
Waterhouse et al., [20]	Women's health	Socio-economic and household demographic covariates: wealth status, religion, ethnicity, education, age, headship status, and marital status.	This study showed that combining work and having young kids did not influence health and instead caused a change in wealth [20]
Zereyesus et al. [21]	Women's empowerment in Agriculture	Control variables: Include mother's age, father's and mother's education, family income, resident, children's gender, and age.	The findings show that neither the composite empowerment score used to capture women's empowerment in agriculture, nor its decomposed component is statically significant in their association with the latent children's health status [21],
Verney et al., [22]	Antenatal Care/ ANC	The principal explanatory variables were maternal and household characteristics. Level of education, household income, mobile phone ownership, and formal employment were used as proxies for socio-economic status.	The finding showed that women's degree of education has a significant positive association with nearly every result variable in ANC uptake [22].
Adebowale et al. [23]	Nutritional status of women (measured by Body Mass Index/BMI)	The key explanatory variables include the asset-based wealth index used as a measure of poverty.	The findings showed that the proportion of employed women under-nourished was lower than those who were not working [23].
Manziona et al., [24]	Maternal employment status	The principal explanatory variables include education, age, writing and reading ability, religion, marital status, number of children,	Results show that those caring for children and working simultaneously were less likely to have a child meet Minimum Meal Frequency (MMF) guidelines. Yet, bringing

Study	Outcome variable	Explanatory variables	Reported findings/ conclusion made
Komatsu et al. [25]	Body Mass Index	children's age, wealth index, maternal work-related status, behavioral practices, and situational characteristics. Several days worked in agriculture, responsibilities/ work, and men aged 19 above lives in the household.	food from home for children to eat at work was positively associated with meeting MMF guidelines [24]. The study suggested that increased agricultural production could improve nutritional status by increasing farm income and food; increased work effort could offset healthy status gains [25].
Lan and Tavrow, [26]	Women's empowerment and maternal mortality	The Study's Controlling variables were economic variables and two separate composite political indexes of transparency and accountability.	The finding suggests that for the 44 low-income countries included in the study, higher female empowerment measured by gender composite indices was not associated with lower maternal mortality ratios after controlling for other measures [26].
Vyas & Heise., [27]	Partner violence against women	Seven community characteristics were explored: Men and women's attitudes towards wife-beating; male unemployment; women's status in paid work; and the educational group of men and women.	A notable finding is that in areas with a higher proportion of women in paid work, women's risk of spouse violence is extensively reduced; thus, a benefit is granted to women who do not work but live in areas where many women do [27].
Nordang et al., [28]	Nutritional status in under five years of age	Socio-demographic characteristics of households: Include child age, primary caretaker, occupation, education level, household headship, and marital form (polygamous versus monogamous).	The findings showed that Women's work in agriculture positively impacted children's nutritional status due to increased household food availability and a negative impact due to less time available for childcare, including feeding [28].

Education is the most reported determinant of women's labor force participation. According to Yakubu [13], in a study carried out in South Africa, the labor force changes were elucidated using a human capital theory that claimed that women's education is positively related to female labour force participation. The study showed a link between educational attainment and female labor force participation, implying that the higher the educational status, the more opportunities females get access to in the job markets. Atieno [29] analyzed the determinants of female labour force participation in Kenya's informal sectors, using the multinomial logit model. The study showed that education, represented by years of schooling, increased females' chances of being employed in the public and private segments. The results also showed that women's land ownership increased their chances of being in the agricultural, public, private sectors and unpaid family work, but not in the informal sector as many people will think.

In the Study of women's LFP in Ethiopia [10], the LFP of a woman having primary (1-6) or junior secondary level (7-8) education was 50.6 % less than those who had a high school or above education [10]. The finding implied that education had a strong positive relationship with employability, notably after completing primary or junior secondary education levels. Sacky [14], in a study of the determinants of females' participation in the labour force in Ghana, concluded that the gap in education between females and males becomes lesser over the years, portraying the fact that more females get involved in the labour market than before. Similarly, another study in Ghana assessing the determinants of labour force participation of women at two points in time, 1991 and 2006, reported that women's labour participation is determined by fertility and educational achievement [3].

Olowa and Adeoti [18] indicated that female education was necessary for rural Nigeria to ensure effective labour market participation. The same study reported that most educated females in rural Nigeria had a higher probability of getting jobs. Similarly, Tingum [16], in an analysis of the determinants of female labor force participation and sectoral decision, concluded that females who have tertiary education and reside in or around urban areas were more likely to work in the industrial, business, and service sectors. Other studies also concluded the positive association between education and female

labour force participation [14,29,30,31,15,11]. Iweagu et al. [2] found that factors such as religion, poverty rate, and per capita income were significant determinants of female labor force participation in rural sectors, while age and literacy rate were the main determinants in the urban sectors.

The present review also witnessed that other individual and household demographic factors significantly explain why some women participate in the labour force more commonly than others. These variables include women's age, marital status, having at least one under-five child, household size, and headship. The likelihood of women's labor force participation was significantly higher in the middle ages than in older generations [4]. As expected, marital status has been found to determine women's labor force participation. Compared to married women, non-married women (singles or widowed or divorced) had 83.5% more likely to participate in the labor market [10]. The finding suggests that marriage could sometimes appear as limiting factor for women to be in the labor force. The result is consistent with the findings reported worldwide [15]. As far as women's household attributes were concerned, the review showed that having a young child less than five years old decreased the probability of women's labour force participation [10]. Put it differently, the likelihood of women's participation in the labor force increased by about 35.5% for households with no under -5 children compared to those with at least one-child under-5 years old. This could be true since having under-5 children at home usually requires much attention and care. Similar conclusions were reached by other studies [32,11]. Another attribute that significantly affected a woman's decision to participate in the labour market is her household size. One of the reviewed studies indicated that women who had a household size greater than 5 were about 3.15 times more likely to participate in the labor market than those with five or fewer households [10]. This finding is consistent with the findings from other studies [17,11]. Finally, one of the reviewed studies indicated headship as a critical determinant of labor force participation. The likelihood of LFP was higher for women household heads than non-heads [10]. This implies that the risk of unemployment tends to increase as women's household position (i.e headship) decreases [32].

As indicated earlier, the second objective of this review is to assess the possible impacts of

women's participation in the labor force.. A considerable proportion of the findings reported the positive effects of labor force participation on women and the well-being of other household members. One of the studies reported that the ratio of employed women under-nourished was lower than those who were not working [23]. In the study of Tanzanian women, researchers found that increasing women's access to mechanized farming tools could reduce women's energy exertion and improves their nutritional status [25]. This agrees with the study carried out in Ethiopia, where women's employment status was an important determinant of nutritional status [33]. Even though gainful employment has been positively associated with better nutrition, positive health outcomes are more often linked to higher levels of women's status and decision-making power [34]. A study in Tanzania indicated that in areas with a higher proportion of women engaged in paid work, women's risk of spouse violence is extensively reduced; thus, a benefit is granted to women who do not work but live-in areas where many women do [35].

One of the most contested findings is the effects of women's work participation on childcare practices. A study of under-five children conducted in Tanzania reported that women's work in agriculture positively impacted children's nutritional status due to increased household food availability but adversely affected overall childcare (including feeding) due to less time available for women to spend with their children [28]. Contrary to the widespread perceptions that women's childcare responsibilities considerably restrain their economic activity in sub-Saharan Africa, one of the findings made extensive counterarguments that mothers' childcare responsibilities in sub-Saharan Africa do not hamper their participation [19]. They can easily combine childcare and work because of female relatives available for free childcare. This is consistent with previous studies in other regions [36,37]. In the context of most African societies, activities of mothering and caretaking are not the sole responsibilities of biological mothers, and grandparents and other household members take a significant share of these responsibilities [38].

Finally, this review is useful in providing an overall understanding of women's participation in the labour force in SSA. Hence, the findings could be used as a springboard for further research in the subject on a regional scale. There are also some limitations of this review

paper worth mentioning. First, the review is based on a limited number of studies from SSA countries, as several local studies were excluded during the screening stage either due to methodological incompatibility or due to smaller sample size or both. This could introduce some selection bias. The synthesis of the impacts of labour force participation was not exhaustive due to the studies' inadequate coverage of a range of livelihood dimensions. Finally, because of the cross-sectional nature of all the studies reviewed, none of them was able to draw causal inferences between women's LFP and the respective outcome variables of interest.

5. CONCLUSION

This review brought to light the main drivers of women's participation in the labor force in SSA. While nearly all the reviewed studies capitalized on the role played by women's education, there are also other individual and household level socio-demographic variables explaining why some women participate in gainful economic activities more often than others. The factors comprise, but not limited to, household size, number of under-five children in the household, household wealth, headship status, and age of women. Some of the reviewed studies reported the availability of local infrastructure, unemployment rate, the prevalence of infectious disease (such as HIV), and residence type (rural/urban) as community-level variables. Nearly all studies reviewed indicated significant positive impacts of women's labor force participation on several domains of women's life and household well-being (such as women's nutrition, childcare, and health service utilization). Some studies also underscored concerns about some adverse effects (such as insufficient attention for themselves and their children) of women's participation in gainful employment in Sub-Saharan Africa.

CONSENT AND ETHICS APPROVAL

Ethical consent to conduct this study was obtained from Hawassa University.

AVAILABILITY OF DATA AND MATERIAL

The articles selected for the scoping review are available in PubMed and Google Scholar.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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