



JANUARY 25, 2021

# COVID-19 and Gender Research in LMICs: October-December 2020 Quarterly Review Report



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**Rationale.** The COVID-19 pandemic continues to disproportionately impact women and girls across the world, with indications that some progress made towards achieving gender equality over the past few decades may be slowed, or even reversed. As vaccines begin to be deployed across multiple (largely high-income) countries, and with novel viral strains emerging more regularly, it is more important than ever to understand the gendered impacts of the pandemic, particularly for low- and middle -income countries (LMIC), to ensure a gender-intentional and evidence-based response.

In October 2020, [EMERGE synthesized findings from over 160 articles](#) published on gender and COVID-19 for LMICs between July-September 2020. This synthesis comes from an ongoing review of peer reviewed as well as grey literature, launched in June 2020 (including studies dating back to February 2020). The review assesses research focusing on one or more LMICs, and covers five broad thematic areas of interest:

1. *Health (women and girls' health outcomes including health workers)*
2. *Gender norms and gendered social impacts (unpaid work, gender-based violence, girls' education, child marriage)*
3. *Economic impacts (financial distress, employment)*
4. *Women's collectives*
5. *Women's leadership*

In our *July-September 2020 Quarterly Review Report*, the majority of peer-reviewed literature from LMICs focused on mental health outcomes. Evidence pointed to women's greater risk, relative to men, of adverse mental health such as anxiety and depressive symptoms during the COVID-19 pandemic. Women experienced barriers to accessing health services, and increases in domestic and unpaid work, unemployment, and income losses. Our review, however, identified only two papers on women's leadership, and a complete lack of research on women's collectives. Additionally, there was a dearth of methodologically robust studies using longitudinal or experimental designs able to establish causal relationships between COVID-19 and gendered outcomes.

There has been an ongoing large volume and high frequency of publications subsequent to our first Quarterly Review Report in October 2020. The current report, the second in this quarterly series, synthesizes over 300 articles (peer-reviewed, working papers, pre-prints, and grey literature), published between October and December 2020.

**Methods.** We carry out a weekly review of research published on gender and COVID-19 across the five thematic areas noted above using six databases: EconLit, NBER, PsycInfo, Pubmed, RePEc and Web of Science; findings are synthesized bi-weekly. Inclusion criteria for eligibility are: 1) peer-reviewed papers, pre-prints and working papers

#### HIGHLIGHTS

- Peer-reviewed literature on COVID-19 and gender continues to focus on women and girls' health, particularly mental health.
- Pandemic-related restrictions and response have created barriers in accessing sexual, reproductive and maternal health services in many settings; tele-health and home-based services may help mitigate these obstacles.
- There is growing evidence of increased domestic violence during the pandemic, though data from LMIC contexts with pre-pandemic comparisons are limited.
- Women are bearing disproportionate economic effects of the pandemic; this burden is heightened for displaced and migrant women. Female enterprise owners appear to face more pandemic-related challenges than male counterparts in many contexts.
- Women's leadership and women's collectives in relation to COVID-19 are highly understudied areas.
- Most identified research was cross-sectional and observational, thus unable to causally link COVID-19 and women and girls' health and well-being.

meeting pre-defined search criteria (Appendix A) 2) articles must contain empirical analyses and complete information on the methodology adopted for the study<sup>1</sup> and 3) articles must include findings on the gendered aspects of social, economic and health impacts of the pandemic in LMIC contexts. Each eligible article is then reviewed for scientific quality, and scored across three characteristics: sampling, measurement instruments, and analysis. Scores can range from 0-6, with 0-2 denoting weak scores, 3-4 denoting moderate scores, and 5-6 referring to strong scores. Papers reporting biological or biomedical outcomes such as case studies on vertical transmission of COVID-19, or studies examining medical outcomes of COVID-19 for pregnant women, have been included in our review but not scored for scientific quality in this Quarterly Review Report.

In addition to the weekly review of published peer-reviewed, working papers and pre-print articles (hereafter referred to as “articles”), we also carry out a monthly review of key websites (Appendix B), for grey literature related to gender and COVID-19 in LMICs. This review of websites acts as a supplement to our findings from scientific literature, providing information on ongoing surveys and studies that might not have been published as journal articles yet. Reports and briefs from website reviews are not scored for scientific quality.

This report presents findings from the weekly research paper reviews, and the monthly website reviews carried out between October and December 2020. **A total of 1,612 peer-reviewed, working papers, and pre-print articles, and 84 website reports and briefs were identified during this time-period based on our search criterion.** Of these, 315 articles (20%) and 15 website reports and briefs (18%) respectively met inclusion criteria and were eligible for further review.

**Review summary.** Of the 315 eligible articles, most were peer-reviewed literature (93%; 294 articles), with eight working papers and 13 pre-prints. Since the inception of our review, the majority of eligible peer-reviewed literature has focused on women and girls’ health, with a notable increase in the number of articles published since July 2020 (Figure 1). Peer-reviewed studies on gender norms and gendered social outcomes, and economic impacts of the pandemic have remained consistently low.

In the October-December 2020 period, peer-reviewed literature as well as working papers and pre-prints primarily covered aspects of women and girls’ health outcomes (270 of 294 peer-reviewed articles; 14 of 21 working papers and pre-prints) (Figure 2). Working papers and pre-prints had relatively higher proportions of articles focused on gendered social outcomes and economic impacts of the pandemic. Our review of websites for reports and briefs also found a substantial proportion of reports and briefs assessing economic impacts as well as gender norms and gendered social impacts. We identified only one peer-reviewed article on women’s leadership, and none on women’s collectives.

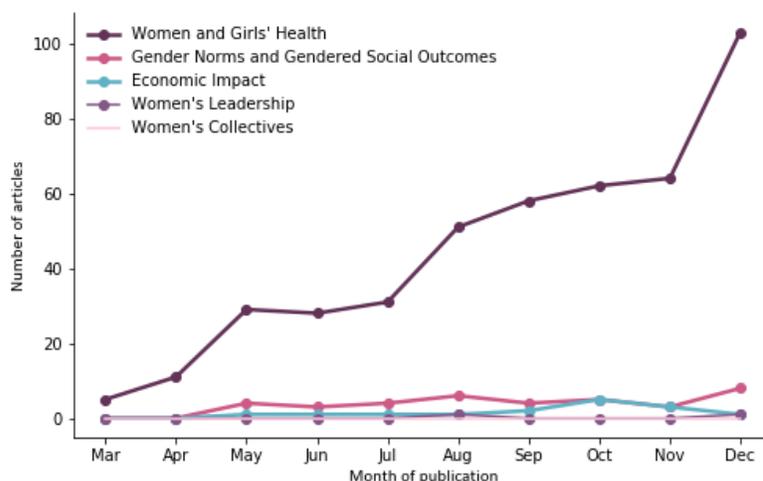


Figure 1: Number of eligible peer-reviewed articles by month of publication

Notes: We anticipate finding more articles published in December 2020 during future rounds of review, given delays between publication and database indexing. This graph includes articles identified since the beginning of our review and covers publications since the beginning of the pandemic.

<sup>1</sup> Articles must include sample size and description [demographics, particularly sex], nature of measures, analytic approach, for non-modelled papers; for modelled or ecological papers, full information on data sources and modelling assumptions

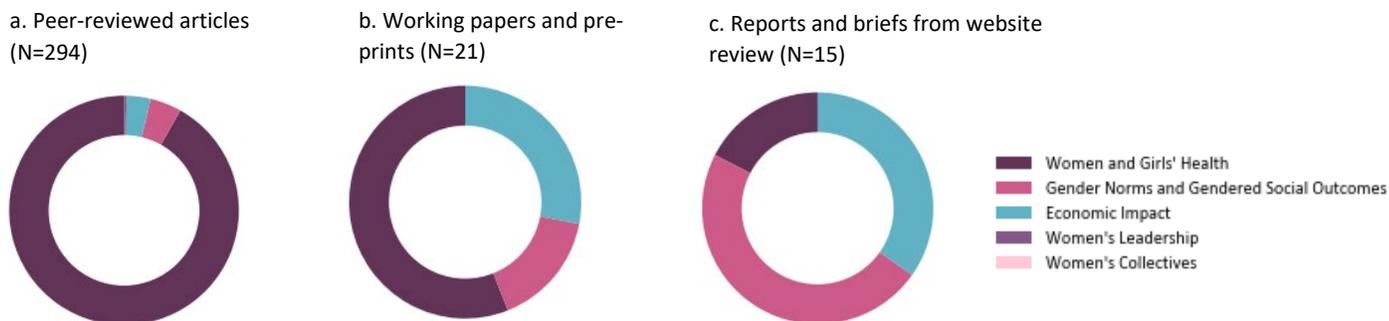


Figure 2: Distribution of articles by type of article and thematic areas (reviewed from October–December 2020)

Consistent with our prior round of quarterly review, **China and Turkey were the most represented LMIC research settings within peer-reviewed articles, working papers and pre-prints** (68 and 43 articles, respectively) (Figure 3). This was followed by studies conducted in India, Iran, and Brazil (25, 21 and 17 studies, respectively). Representation from African countries was lower, with 13 studies from Ethiopia followed by eight studies from Nigeria. Other geographies with more than one study conducted within their country boundary included Pakistan (12 studies), Bangladesh (11 studies), Mexico (seven studies), Peru (six studies), Argentina (five studies), Jordan (five studies), Nepal (four studies), Colombia, Ecuador, Egypt, Indonesia, Lebanon, Malaysia, Philippines, Rwanda, Vietnam, and West Bank and Gaza Strip (two studies each).

Authorship from LMICs was well-represented in research articles; 254 peer-reviewed articles (86%) and 14 working papers or pre-print articles (66%) had either first and/or senior authors affiliated with an institution in a LMIC or were authored by an LMIC-based institution.

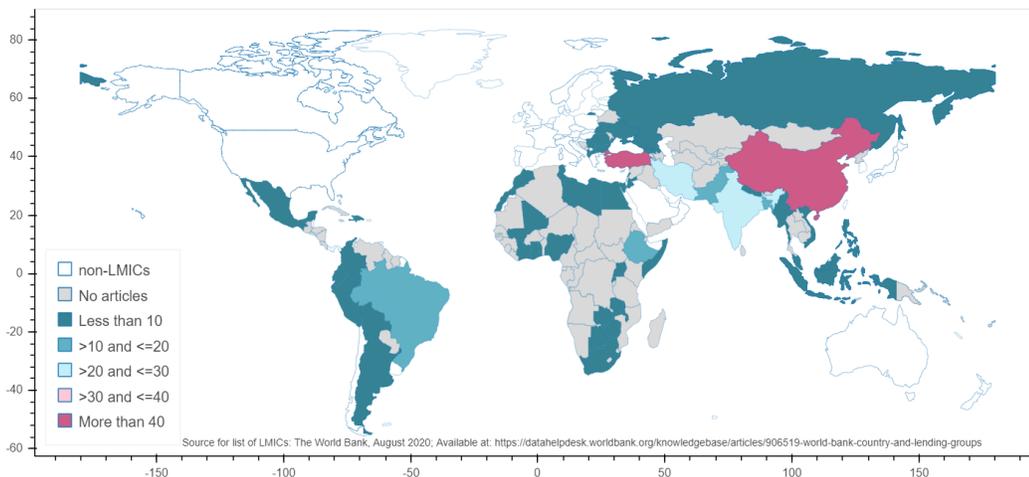


Figure 3: Number of peer-reviewed, working papers, and pre-print articles, by country (reviewed from October–December 2020)

Over the past six months, there have generally been more and more papers being published with strong scientific quality (based on our review of study sampling, measurement instruments, and analysis; Figure 4). In the October–December period, approximately half of the articles assessed for scientific quality received strong scores (25, 57, and 45 articles for October, November and December, respectively).

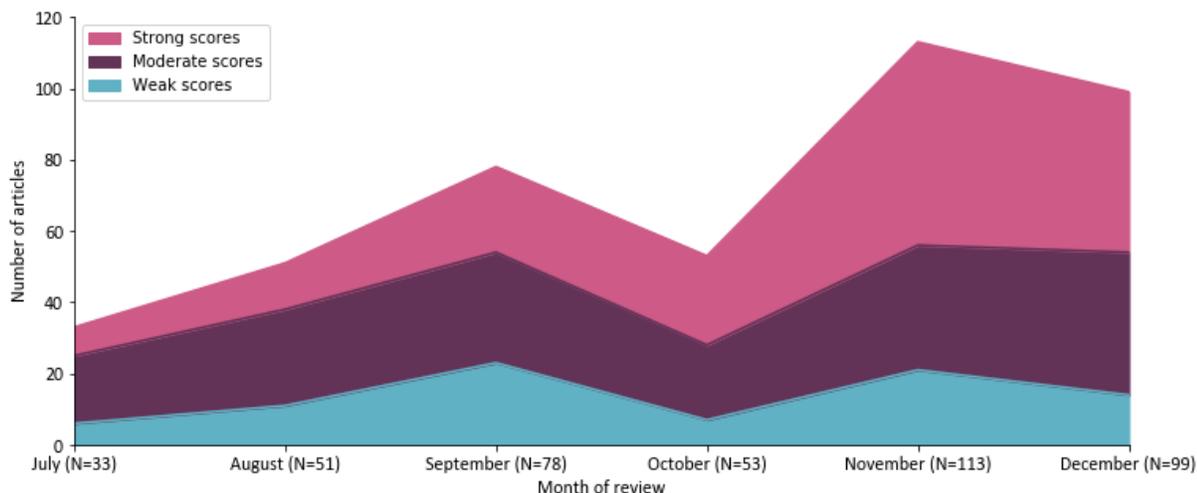


Figure 4: Number of peer-reviewed, working papers, and pre-print articles, by scores received for scientific quality, over month of review (reviewed from October-December 2020)

Most reviewed articles focused on general population groups in their target areas (95 studies; 30%). Thirty-five studies examined outcomes for health care workers (11%), and 19 studies included students and teachers as their samples of interest (6%). Pregnant women, mothers, adolescents, elderly population, female workers, transgender persons, COVID-19 patients, and individuals with other diseases, were some of the other population sub-groups covered by smaller numbers of the reviewed articles.

### A. Women and Girls’ Health

**Evidence indicates men to have higher risk of COVID-19 disease severity and mortality relative to women, across multiple geographies.**<sup>1-6</sup> A meta-analysis of 41 studies covering over 5,000 COVID-19 patients found men to be around twice as likely to develop severe cases of COVID-19 infection.<sup>1</sup> A review of COVID-19 infections among health workers found that women and nurses (the majority of whom are female) had a higher likelihood of being infected, but that men and doctors (the majority of whom are male) had a higher likelihood of dying from COVID-19.<sup>4</sup> While there have been some exceptions to these findings, they tend to focus on specific populations and contexts, including a study among COVID-19 patients in an economically marginalized geography in Brazil and a small sample study with patients from one hospital in China, both of which found no significant sex differences in COVID-19 disease severity or mortality.<sup>7,8</sup> Population-based studies examining sex differences in COVID-19 prevalence were notably few,<sup>9,10</sup> as most studies focused on hospital data from COVID-19 patients assessing COVID-19 disease severity and mortality. This is unsurprising given the lack of population-based testing and disease surveillance in most settings. A repeated cross-sectional study in over 100 cities in Brazil found no significant difference in COVID-19 prevalence by sex.<sup>9</sup>

COVID-19-related health outcomes among pregnant women studied in multiple hospital-based and case studies show mixed findings in terms of maternal complications, pre-term births and cesarean section.<sup>11-18</sup> Research from surveillance data in Brazil suggests that existing socioeconomic inequities heighten the risk of adverse COVID-19-related peripartum outcomes,<sup>11</sup> indicating the importance of considering social and economic characteristics in addition to women’s physical and biological health status when researching these outcomes. There is an ongoing tension in identifying the most effective, ethical and efficient ways to develop optimal responses to treating pregnant women infected with COVID-19, as highlighted by a recent review of COVID-19 treatment studies indicating that 74%-80% of studies opted to exclude pregnant women from their study populations.<sup>19</sup>

**Overall, evidence suggests significant gender differences in knowledge and behaviors related to COVID-19.** Most reviewed research indicates higher COVID-19-related knowledge, as well as adherence to protective behaviors such as mask wearing and handwashing, among women than men in multiple settings including Iran, China, Rwanda, Democratic Republic of Congo, Bangladesh, and Brazil.<sup>20-30</sup> These findings were not uniform, however. Research on Chinese adults across 30 provinces found no significant difference in knowledge and practices related to COVID-19 by gender,<sup>31</sup> while another study from China found men to be more likely than women to wear masks.<sup>32</sup> Among young adults in India, and health workers in Nepal, men were more likely to have higher levels of COVID-19 knowledge than women.<sup>33,34</sup> It is highly likely that social, political, and cultural factors influence these outcomes, particularly preventive behaviors such as mask wearing and social distancing. As such, COVID-19 knowledge and practices can be expected to be context- and population-specific. Additionally, no reviewed studies have developed or used standard, validated measure for knowledge and practices in the context of COVID-19, suggesting that measurement variance may contribute to some of the identified variations.

**Call- and text-based messaging campaigns can be effective in improving knowledge levels among women,** as shown by an experimental study in Bangladesh and India. Messaging was more effective in increasing awareness among women than among men, though the gender-based treatment effects were stronger in Bangladesh than in India. The experiment also found that women who were concerned about family members' health complied significantly more with COVID-19 rules, and women concerned about household finances complied less with COVID-19 regulations.<sup>35</sup>

**Consistent with our previous Quarterly Review, we continue to observe strong evidence from most geographies that women's mental health has been worse than men's during the COVID-19 pandemic.** Over 80% of reviewed studies on mental health (82 of 98 articles) indicated that women had higher risk of anxiety, depression, psychological distress, post-traumatic symptoms, and suicidal thoughts, in comparison to men.<sup>36-118</sup> This body of research spans a broad range of geographies, including Argentina, Bangladesh, Brazil, Bulgaria, China, Ecuador, Egypt, India, Iran, Jordan, Lebanon, Mali, Mexico, Nigeria, Philippines, Russia, Turkey, Vietnam, and West Bank and Gaza. A meta-analysis of mental health outcomes during the pandemic examining 68 studies across 19 countries found that women had higher odds of anxiety as well as depressive symptoms.<sup>91</sup> However, as with our July-September 2020 Quarterly Report review, the predominant use of cross-sectional surveys in the reviewed studies hinders our ability to make inferences about temporal changes in gender differences during the COVID-19 pandemic. Among the few studies that followed more robust designs, longitudinal studies from India and Brazil confirm our prior findings that women have higher risk of stress and anxiety relative to men due to the pandemic.<sup>48,60</sup>

Men and women also differ with regard to coping strategies for the psychological distress they have been experiencing during the pandemic. Female students in Malaysia engaged more in more interaction-based coping strategies, which included support seeking, whereas male students relied on mental disengagement and acceptance to cope with stress during COVID-19.<sup>119</sup> Relatedly, among people living with HIV in Argentina, women benefited more from resilient coping compared to men, in terms of its ability to mitigate the relationship between economic hardship and perceived stress.<sup>120</sup> This highlights the need for targeted, gender-intentional interventions to support individuals in dealing with adverse mental health outcomes during the pandemic.

Many mental health related studies also focused on two specific populations: healthcare workers, and pregnant women. **Female healthcare workers are experiencing higher levels of anxiety, helplessness, emotional exhaustion, depression and insomnia than male counterparts in multiple countries across the world.**<sup>37,41,51,55,61,69,71,83,85,88,97</sup> **The pandemic has also compromised pregnant women's mental health,** including elevated levels of fear, anxiety and depression, as noted by studies from China, Turkey, Iran, Argentina, India, and

Ethiopia.<sup>78,101,108,121-132</sup> Social support for pregnant women has, however, been shown to reduce fear of COVID-19, anxiety, and stress during the pandemic in China and Ethiopia.<sup>121,133</sup> Utilizing social media communication channels for antenatal health care information can also improve pregnant women's experiences of perceived stress, anxiety, and depression, at a higher rate than texting or hospital hotlines during the COVID-19 pandemic, as noted by research from China.<sup>134</sup>

**The COVID-19 pandemic has created barriers in accessing health services, particularly sexual and reproductive health care, for women and girls.** An ecological modelling study of country-level contraceptive method mix, unmet need, and potential declines in contraceptive use during the pandemic found Latin America and Sub-Saharan Africa to be the regions at greatest risk of reductions in contraceptive use. This was because of a higher reliance on short-term contraceptive methods which have faced more COVID-19-related disruptions than permanent methods such as sterilization.<sup>135</sup> These findings are echoed by a global survey with researchers, policy makers, and health care providers, which highlighted a striking reduction in access to contraception as well as abortion services across different countries, as sexual and reproductive health services were deprioritized in favor of pandemic response and COVID-19-related services.<sup>136</sup> **One potential solution to mitigating challenges in accessing clinical abortion services may be improving the access to home-based medical abortions,** as advocated by a recent systematic review which found no difference in the effectiveness of home-based vs. clinic-based medical abortions.<sup>137</sup>

**Evidence from India, China, Turkey, Jordan, and Peru indicates reductions in access to antenatal care services for pregnant women due to lockdown restrictions.**<sup>138-141</sup> An analysis of deliveries in a single hospital in India found a significant increase in the stillbirth rate during the pandemic when compared to deliveries during the same months in 2019; among the stillbirth cases, 31% reported delay in provision of care in 2020, whereas only 11% reported delays in 2019.<sup>142</sup> Tele-consultations for pregnant women could prove a useful intervention for pregnant women in this situation, as noted by a cross-sectional study in China which found high levels of patient satisfaction with a free online communication platform that allowed pregnant women to consult professional obstetricians.<sup>143</sup>

**The challenges in accessing non-COVID-19-related health services are disproportionately higher for marginalized groups, including transgender and non-binary individuals.** A multi-country survey with transgender and non-binary participants (nearly half of whom were from Turkey or Thailand) noted decreased access to gender-affirming resources such as hormone therapy, surgical aftercare materials, cosmetic supplies and services, mental health counseling and therapy services, and body modifiers.<sup>144</sup> Mental health counseling and therapy was the most commonly cited resource affected (around 43%), with a greater proportion of transmasculine individuals reporting reduced access to counseling than non-binary and transfeminine individuals.

## B. Gender Norms and Gendered Social Impacts

The current Quarterly Review identified 29 articles on gendered social impacts of the pandemic, 11 of which were non-academic reports and briefs from our monthly website review. **There is growing evidence of increased domestic violence during the pandemic.** While our previous Quarterly Review Report focused on studies that analyzed data from domestic violence and women's helpline centers in different countries (India, Peru, and Argentina), there are now studies emerging that have been able to collect primary data from women. Reports from multi-country surveys carried out by UN Women,<sup>145,146</sup> as well as small scale surveys with women in Tunisia,<sup>147</sup> and social worker reports in Zimbabwe,<sup>148</sup> have indicated that more women are experiencing violence within their homes during the COVID-19 related lockdowns. **However, we continue to observe a lack of longitudinal studies, or studies comparing incidences of violence before and during the pandemic for most LMIC contexts.**<sup>149-151</sup> A recent synthesis of global research related to violence against women and children (VAWC)

during the pandemic has also noted the relatively limited amount of evidence from LMICs.<sup>152</sup> Studies are beginning to adopt more innovative methodologies to study violence against women, including a global analysis of Tweets related to family violence, which found mentions of rising rates of domestic violence as a consequence of COVID-19 to be the most common family violence-related Tweets.<sup>153</sup>

Consistent with our previous Quarterly Review Report, we find **strong evidence of the disproportionate increase in unpaid domestic burdens for women relative to men across multiple geographies in Asia-Pacific and Africa.**<sup>154-</sup>

<sup>156</sup> A review of studies published prior to the pandemic, on impacts of working from home found women to be experiencing higher rates of work exhaustion when they work from home; women reported greater work-family conflict due to difficulty in detaching from work.<sup>157</sup> While the burden of domestic work has increased, women's professional achievements may be reducing during the pandemic, particularly in academia. An analysis of journal submissions to Elsevier between February and May 2018-2020 found that women submitted significantly fewer manuscripts than men during the pandemic, especially in health & medicine journals, and if women were in more advanced career stages.<sup>158</sup>

**We continue to observe a limited number of studies on the gendered impacts of COVID-19 amongst children and young adults.** Only one peer-reviewed study for this population sub-group was identified in our review, which was a qualitative analysis that noted an increase in bodily integrity risks such as increased exposure to intra-household violence, mixed exposure to child marriage risks, and elevated community-level violence during the pandemic for young girls in Ethiopia, Côte d'Ivoire and Lebanon.<sup>159</sup> Grey literature in the form of policy briefs and reports also points to stark gender differences for youths in LMICs, often reflective of existing gender norms. A telephone survey with families in Pakistan found no significant differences between girls and boys with regards to educational activities during the lockdown, but that girls were more likely to be carrying out household chores than boys.<sup>160</sup> Gender differences have also been reported by adolescents in Jordan in terms of freedom of movement, with female adolescents being more likely than male adolescents to be asked to stay at home without visitors.<sup>161</sup> In the same survey, female adolescents also reported increasing challenges in obtaining female menstrual hygiene products during the pandemic.

**As with the previous Quarterly Review Report, the current round of review did not identify any articles on key areas of gendered impacts of the pandemic,** such as women's agency within the household, social support, access to information, and women's digital agency. A more comprehensive understanding on how COVID-19 is affecting these areas is necessary to inform effective policy action and mitigation strategies.

### C. Economic Impacts

**There is strong evidence from peer-reviewed as well as grey literature indicating the disproportionate economic impacts of the pandemic for women, relative to men.** Analysis of data from the Colombian labor market during COVID-19 found that overall, wages fell significantly more for women compared to men; the gender gap for employment rate increased from 8.0 percentage points pre-COVID-19 to 9.5 percentage points post COVID-19.<sup>162</sup> Women in Colombia also experienced lower rates of labor market participation after the inception of the COVID-19 pandemic, and had a higher likelihood of dedicating most of their time to domestic work. **Displaced women appear to be particularly vulnerable the pandemic,** with research from Colombia showing that displaced Venezuelan women are at higher risk of adverse economic impacts, relative to Colombian women; displaced women constitute a majority of the workforce in highly impacted sectors such as informal work and wage work.<sup>163</sup> Similarly, female garment factory workers in Ethiopia reported loss of income, food insecurity, and a lack of funds for migration during the pandemic.<sup>164</sup>

**The pandemic has impacted self-employed women** in Zambia,<sup>165</sup> Bangladesh,<sup>166</sup> China<sup>167</sup>, Malawi and Liberia,<sup>168</sup> causing significant income losses and challenges in acquiring the necessary monetary and other supplies for running their businesses. A qualitative study with female small-business owners in Bangladesh reported that an increase in household work, lack of money, and difficulty in mobility posed key challenges during the pandemic.<sup>166</sup> In China, female farm owners experienced more shocks to resource allocations, and were more vulnerable to long-term pandemic impacts, than male farm owners.<sup>167</sup>

**Findings with regards to economic impacts by sex of the head of the household are mixed.** A microsimulation of potential income losses at the household level in Argentina, Brazil, and Mexico, based on the economic sector in which household members worked, found no significant difference in poverty related impacts of COVID-19 by sex of the head of the household.<sup>169</sup> In contrast, in Ethiopia, Malawi, Nigeria, and Uganda, female-headed households experienced worse economic impacts such as loss of income, and food insecurity.<sup>170</sup> Individual agency within the family may also impact economic outcomes; In Indonesia, households where the wife was involved in decision-making on savings had significantly higher likelihood of savings, thereby increasing the potential resilience of households to shocks such as the COVID-19 pandemic.<sup>171</sup>

**There is evidence of variable implementation of social protection programs in Latin American countries, including Ecuador, Mexico, Brazil, and Argentina.**<sup>172</sup> In Ecuador, 88% of the recipients of a cash transfer program during the pandemic were women, while in Argentina, 56% of the beneficiaries of an emergency family income program were women. More information on targeting and selection procedure, actual beneficiaries, and the short-term impacts of the new cash transfers across countries, will enable a better understanding of effects of such programs on vulnerable groups including women.

#### D. Women's Leadership

**The single paper on women's leadership reviewed between October and December 2020 finds no significant differences in COVID-19 fatality rates between countries led by men and countries led by women;**<sup>173</sup> these findings differ from what has been observed in prior studies.<sup>174,175</sup> This divergent finding may be attributable to several methodological differences across studies, including the conceptualization of the term 'leader', as well as variations in the COVID-19-related outcomes examined in these studies (number of cases, death rate). The current study identifies a country as being women-led if a woman holds executive authority and wields real power (commands a military), regardless of whether she is head of state or head of government. The study also notes that countries with stronger feminine cultures, less power distance, long-term orientation, and collectivism have significantly fewer COVID-19 related deaths. These findings point to the strong influence of cultural dimensions with regard to COVID-19 performance of countries. The contrast with previous studies underscores the need for more research on how to define women's leadership, as well as the role of gender and leadership style in addressing the pandemic.

#### E. Women's Collectives

Between July and December 2020, **we have not identified any eligible article on women's collectives.** Women's collectives and women's groups are an important platform for providing social support, as well as economic, and health benefits to women in low-resource settings. As such, it is essential to examine the role played by these groups in alleviating the gendered impacts of the pandemic.

### Conclusion

The current report covers articles identified during the review period October-December 2020. Encouragingly, this three-month window saw both a marked increase in the number of eligible publications relating to COVID-19 and gender (over 120 more than the July-September Quarterly Review Report), as well as improvements in the

scientific quality of this research (in terms of sampling, measurement instruments, and analysis). Overall, the findings from this round reinforce our understanding of gendered impacts of the pandemic from the previous round of review. Mental health continues to be the most studied topic, with strong and relatively consistent findings across different geographies highlighting the disproportionate prevalence of psychological stress among women relative to men, and among high-risk populations such as health care workers. Relative to the last Quarterly Review Report, we note a higher number of studies related to COVID-19 knowledge and adherence to preventive behaviors, as well as a small increase in research on access to health care and gendered impacts of the pandemic.

Studies from multiple LMIC settings indicate interruptions in the provision of, and/or barriers in accessing sexual, reproductive, and maternal health services. These barriers are the result of many factors, including the reallocation of personnel and resources to basic COVID-19 response activities, as well as restrictions on movement during protracted lockdowns. Research is increasingly indicating that alternatives to traditional service delivery, including telemedicine and home-based health care, as well as mobile phone-based health education campaigns, may be timely and effective means of mitigating interruptions in service delivery and access moving forward. Key to this approach, however, is thorough consideration of the digital divide, to avoid further marginalizing underserved populations.

Women's economic activity continues to be hampered more than men's, with additional vulnerability highlighted for displaced and migrant populations, as well as female enterprise owners, in this round of review. As previously noted, this hindrance is experienced in tandem with disproportionate increases in unpaid domestic work for women and girls. There has been some research on the social protection programs implemented to mitigate some of this damage, but the targeting and implementation of these programs, as well as the benefits achieved therefrom, are inadequately understood.

There remain clear gaps in research designed to improve our understanding of the ways that the COVID-19 pandemic has, is, and will continue to, affect the health and well-being of women and girls in LMICs worldwide. We have limited, and in some cases no research, to explicate the relationship between the pandemic and women's collectives, women's leadership, social protection programs, menstrual health, adolescent health, and household agency and family dynamics. There is a great need for more robust research, with longitudinal study designs or advanced analytical techniques that can allow for interpretations regarding causal relationship of the outcomes with the pandemic, to move beyond the cross-sectional snapshots on which most of this research is reliant. Additionally, we lack appropriate baseline data for some of the gendered outcomes important to understanding how COVID-19 is affecting women and girls, inhibiting our understanding of the changes experienced over the past year. Finally, while there are measures in development or recently released for some gendered aspects of COVID-19, particularly in the area of mental health, many aspects of women's lives affected by this pandemic (e.g. women's leadership, agency, participation in collectives) do not have field-standard measures that would enable comparison across settings.

Addressing these measurement, methodological, and data gaps, and continuing to expand our understanding of how COVID-19 is affecting the lives of women and girls around the world, is critical to a robust pandemic response. A broader and deeper evidence base is urgently needed to ensure that programs and policies designed to mitigate the adverse effects of this pandemic are designed, implemented and evaluated with gender-intentional lenses.

*Please visit the [EMERGE- Gender and COVID-19 webpage](#) for survey-ready, COVID-19-related gender measures and modules. Register at the [EMERGE website](#) to register and receive updates on new gender equality and empowerment measures.*

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**Appendix A.** Review search terms, by thematic area of focus

| Thematic area                             | Search terms   |
|---|--|
| Women and girls' health                   | (covid OR coronavirus OR SARS-CoV-2) AND (gender OR women OR woman) AND (maternal OR pregnant OR birth OR antenatal OR reproductive OR sexual OR "family planning" OR psychological OR mental OR anxiety OR stress OR menstrual OR "health worker" Or nurse OR midwife OR knowledge OR information)                  |
| Gender norms and gendered social outcomes | (covid OR coronavirus OR SARS-CoV-2) AND (gender OR women OR woman) AND (freedom OR coercion OR agency OR empower OR marriage OR violence OR access OR media OR unpaid OR domestic OR household OR trafficking OR exploitation OR "digital inclusion" OR "gender norms" OR "gender roles" OR "child care")           |
| Economic impacts                          | (covid OR coronavirus OR SARS-CoV-2) AND (gender OR women OR woman) AND (collective OR economy OR "financial inclusion" OR money OR "food insecurity" OR loan OR borrow OR asset OR bank OR saving OR poverty OR market OR "government scheme" OR "financial autonomy" OR enterprise OR business OR "informal work") |
| Women's leadership                        | (covid OR coronavirus OR SARS-CoV-2) AND (gender OR women OR woman) AND (leader OR manager OR supervisor OR elected)   |
| Women's collectives                       | (covid OR coronavirus OR SARS-CoV-2) AND (gender OR women OR woman) AND (collective OR "women's group" OR "women's collective" OR "participatory group")   |

**Appendix B.** List of websites included in monthly reviews.

1. <https://data.unwomen.org/COVID19> [Publications section only]
2. <https://www.genderandcovid-19.org/resources-page/>
3. [https://www.ilo.org/global/topics/coronavirus/impacts-and-responses/WCMS\\_749399/lang--en/index.htm](https://www.ilo.org/global/topics/coronavirus/impacts-and-responses/WCMS_749399/lang--en/index.htm)  
(monthly ILO monitors)
4. <https://www.ilo.org/global/research/lang--en/index.htm>
5. <https://www.cgdev.org/topics/coronavirus>, [Publication section only at the bottom]
6. <https://www.worldbank.org/en/topic/gender/brief/gender-and-covid-19-coronavirus>
7. <https://www.poverty-action.org/recover/research-projects>
8. <https://www.odi.org/our-work/coronavirus> [Publications section only]