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Parker, Alexandra; Maree, Gillian; Götz, Graeme; Khanyile, Samkelisiwe

2020-08-31
Gauteng City-Region Obervatory
https://hdl.handle.net/10539/29767
Parker, A., Maree, G., Götz, G., and Khanyile, S. (2020) 'Women and COVID-19 in Gauteng' GCRO Map of the Month. August 2020. Johannesburg: Gauteng City-Region Observatory.

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Alexandra Parker, Gillian Maree, Graeme Gotz, Samkelisiwe Khanyile
September 1, 2020



There's no gender-neutral pandemic, and this one is no different. Women are affected not just by the virus or the disease, but by the circumstances surrounding it.

Phumzile Mlambo-Ngcuka, executive director of U.N. Women

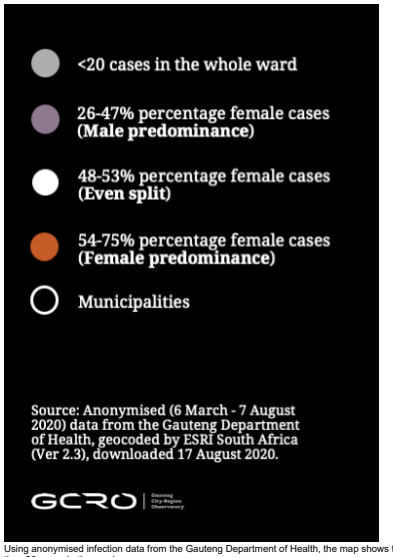
More women (56%) than men are testing positive for COVID-19 in Gauteng.

This gender gap is largely occurring for women of working age (from 20 to 65 years of age) and for the very elderly. Although there are quite a few countries in the developed world with a proportion of female cases above 55%, the key difference is that in those countries the majority of this gender bias is explained by cases among those over 80 years of age. For those aged 85 and older the number of female cases is nearly double male cases, internationally as well as in Gauteng. This is largely as a result of women's higher life expectancy. In developing countries, there is a higher proportion of male cases. However, across the globe and in South Africa, men have higher mortality rates.

This August 2020 Map of the Month is presented as a story map and draws on the infection data from the Gauteng Department of Health (6 March - 7 August 2020) and GCRO's March 2020 COVID-19 vulnerability indices based on Quality of Life V (2017/18) survey data, to understand the ways in which women may be more vulnerable than men to COVID-19. We also explore some of the implications for this gender bias in the number of positive cases.

The COVID-19 infection data as well as the GCRO vulnerability index points to a double burden for women. Women are testing positive at a higher rate than men and women have a greater social and economic vulnerability during lockdown, again with women of working age being the most affected.

Proportion of COVID-19 cases per ward that are female



Using anonymised infection data from the Gauteng Department of Health, the map shows the percentage of female cases per ward. Wards shaded in orange have higher proportions of women testing positive for COVID-19 and wards shaded in purple have a greater proportion of male infections. Wards that are shaded white are close to an even split between men and women (between 48% and 53% female infections). Wards shaded grey have fewer than 20 cases in the ward.

The map and Figure 1 below illustrate that the majority of wards in Gauteng have a greater proportion of female COVID-19 cases. Only 6% (31) of wards have a higher proportion of male cases. Over two thirds of wards (68%) have a majority of female cases.
The map also highlights those few wards where the proportion of male cases is greater than female cases. In areas like Carletonville, Westonaria and Randfontein, the high male proportion of cases may relate to the dominance of the mining sector which has a mostly male workforce. In other areas like Mayfair, Fordsburg and Laudium, it is possible that the higher proportion of male cases is driven by mostly male worshippers in mosques.
Figure 1: Interactive chart showing the proportion of male and female cases per ward.
Source: Anonymised (6 March - 7 August 2020) data from the Gauteng Department of Health, geocoded by ESRI South Africa (Ver 2.3), downloaded 17 August 2020.
The chart shows the proportion of female (orange line) and male (purple line) cases for each of Gauteng's 529 wards. Hover over the lines to see the detail for each ward. As with the map, wards with fewer than 20 cases have been excluded. In approximately 0,3% of cases, the gender is undisclosed. This data is not plotted on the chart but affects the overall percentages per ward.
Contrary to global trends the excess number of female cases are occurring in Gauteng's working age population. The gender split for the population in Gauteng is even (50% women to 50% men according to 2020 population estimates from StatsSA) so the number of cases is in excess of this ratio. Figure 2 below shows the number of cases by age and gender. The size of the bubble represents the total number of cases for each age (6 March - 7 August 2020). The colour of the bubble represents the proportion of female infections: orange shading indicates a higher proportion of females and purple shading indicates a higher proportion of male infections. Hover over the chart to see exact figures for each age.
Figure 2: Percentage of female cases by age
The chart shows the excess numbers for people between the ages of 20 and 60 - illustrated by the clustering of the bubbles. It shows that the proportion of female infections is higher for younger working adults (in their twenties) and drops to the average of 56% for older working adults. For cases over the age of 80 the dark orange shows a much higher proportion of female cases in line with international trends and the higher proportion of females in the population at this age. The higher proportion of male infections is really only evident for a few ages under 10 years of age.
The gap between the numbers for men and women began to emerge around mid-June which relates roughly to the implementation of lockdown level 3, allowing for a lag in the development of symptoms and subsequent testing.
Testing data for South Africa shows that a similarly higher proportion of women (56%) are being tested for COVID-19 and a slightly higher proportion of women are testing positive (59%) (based on week 32 data which corresponds to the last week of infection data presented here). This means that more women are being tested for COVID-19 and that women are slightly more vulnerable to contracting the disease. Women may be testing more than men for a number of reasons: 1) as part of pre- and post-natal care they may be having routine tests; (2) women who experience symptoms may be better at seeking care or testing; and (3) women may be experiencing symptoms at a greater rate for various reasons discussed below.
As of 1 July 2020, the death data disaggregated by sex showed a higher level of mortality for men in South Africa, which is in line with global patterns and suggests that the higher rate of cases is not resulting in a higher mortality rate for women.

What might be driving the higher rate of COVID-19 cases for women?

There are several possible explanations for why working women may be more exposed to COVID-19 in the Gauteng context. It may be that women returning to work under lockdown level 3 are more likely to be in more vulnerable higher-contact care and frontline service work (e.g. cashiers, cleaners and nurses). It is also possible that because women make up the majority of grant recipients that they are contracting the virus at a higher rate than men while standing in queues for monthly payments. We explore some additional potential explanations below.



To understand some of the drivers for the higher rates of female cases, we returned to GCRO's two risk indices related to COVID-19 vulnerabilities. Index 1 considers risk factors related to preventative measures such as maintaining high levels of personal hygiene and practising social distancing. These risk factors include living in a crowded dwelling; the absence of piped water; shared or inadequate toilet facilities; dependence on public health care facilities; limited access to communication tools; and reliance on public transit.
Index 2 examines risk factors related to lockdown conditions that are likely to increase health and socio-economic vulnerability. These factors include existing health conditions, and socio-economic conditions such as risk of hunger, ability to save money and access to medical aid. Each index ranges from 0-100, with 0 representing the lowest and 100 representing the highest level of risk.
The chart (Figure 3) shows the relationship between sex and the two risk indices related to COVID-19 vulnerabilities. It shows that women are more likely to live in crowded conditions (most likely because they are more likely to live in larger households). Women are also more likely to rely on public transport. These factors may contribute to female vulnerability with regards to contracting COVID-19.
Figure 3: COVID-19 risk scores by sex for Index 1 and 2
The chart also shows that women are more vulnerable across all six factors related to the socio-economic and health impacts of the COVID-19 pandemic (Index 2). Women are more likely to report a poor health status and to live in households with pre-existing conditions. Women are more likely to live in households experiencing hunger risk and to have difficulty saving money. Women are also less likely to have access to medical aid and are more likely to rely on public health care services. Combined with their burden of care for children and the elderly, women are more likely to be visiting public health facilities to access healthcare for themselves or for people in their care. This may mean they are more likely to access testing services and or be exposed to the virus in the course of accessing treatment for themselves or others in their care. This set of vulnerabilities may not translate directly to greater risk of infection, but is crucial in understanding gendered vulnerability more broadly in the context of the current pandemic.

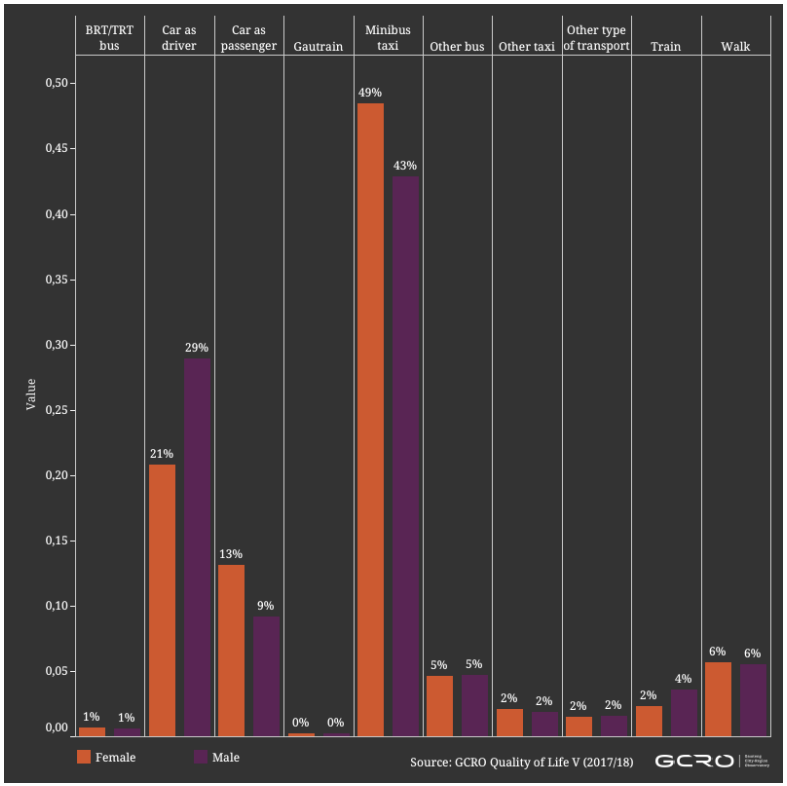


Figure 4: Transport mode and sex

Some of women's vulnerability to maintaining social distancing stems from their greater reliance on public transport. This chart shows the break down of transport mode and sex. More women use minibus taxis for their most frequent trip (49%) compared with 43% of men and thus, under current conditions with full occupancy in minibus taxis, more women may be exposed in the course of travelling. In comparison, more men (29%) than women (21%) use a car as a driver, with a much lower risk of exposure to the virus. More men use the train (3.6%) compared with 2.4% of women, but this is a much smaller proportion of transport users.

What are the implications of this gender imbalance?

Higher numbers of female cases are going to compound existing vulnerabilities faced by women and female-headed households. Some of the economic impacts of the lockdown in South Africa have surfaced in recent research on the pandemic. Results from the first wave of the NIDS-CRAM survey show that women have been more severely affected than men during the 'hard' lockdown period. Net job losses between February and April were higher for women than for men, with women accounting for two-thirds of the total net job losses. Women are more likely to live in households that reported running out of money for food in April 2020 (Casale & Posel, 2020). In addition, more women are living with children and spending more hours on childcare since the start of the lockdown (Casale & Posel, 2020).

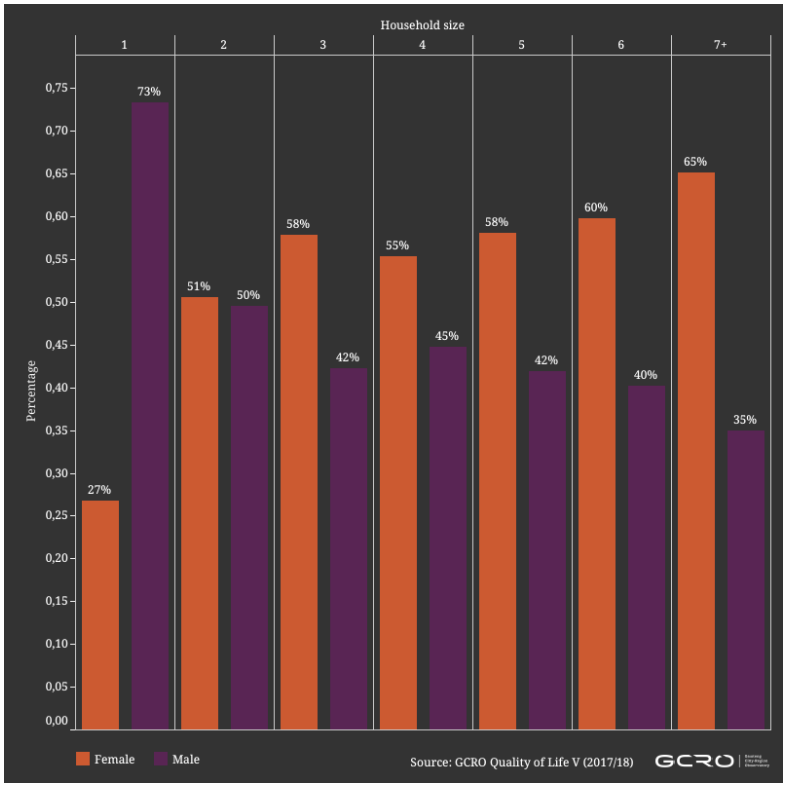


Figure 5: Proportion of male and female respondents in the QoL V (2017/18) survey by household size
The chart shows the breakdown of sex and household size in Gauteng. It reveals how men dominate in single-person households (of those living in single person households, 73% are men), but as household size increases so does the proportion of female respondents living in these households (of those living in households with seven or more members, 65% are women). The mean household size for male respondents is 2.85 and 3.67 for female respondents. Women are more likely to live in larger households and they are more likely to live with more children and so this points to an increased risk of intrahousehold transmission. In addition, larger households are associated with a lower quality of life and are more likely to have resource constraints, indicated by an increased risk of hunger. (For more detail on risk factors and household size see our previous work on household characteristics).
More women have more dependent children: 77% of adult women have dependent children (compared with 65% of adult men) and women have a mean of 1.93 dependent children (Men have 1.63). This means that more people, particularly children, will be affected by women being ill and unable to do paid work and/or provide unpaid care work.
It is, therefore, critical that the health of women and their apparent increased risk of infection is addressed. Interventions at taxi ranks and at health care services could assist women using these modes of transport or accessing healthcare for themselves or relatives to reduce the risk of contracting COVID-19 in these circumstances. Not only would this benefit women directly but also the family members for whom they are caring or working to support.



Note on the data: The infection data used in this analysis is from the Gauteng Department of Health, with geocoding by ESRI South Africa (Ver 2.3)*, and includes all cases from 6 March - 7 August 2020.* downloaded 17 August 2020*. The data contains only confirmed positive cases of COVID-19. The data, therefore, cannot provide the number of infections in the Gauteng population, only the number of confirmed cases.*
Recommended citation: Parker, A., Maree, G., Gotz, G. and Khanyile, S. (2020) Women and COVID-19 in Gauteng, GCRO Map of the Month, Gauteng City-Region Observatory, August 2020.

References

Casale, D., & Posel, D. (2020). Gender and the early effects of the COVID-19 crisis in the paid and unpaid economies in South Africa. Available from cramsurvey.org.

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