

Gender and trust in government modify the association between mental health and stringency of public health measures to reduce COVID-19

Dr Lily O'Hara, Associate Professor of Public Health, Qatar University
 Dr Hanan Abdul Rahim, Associate Professor of Public Health, Qatar University
 Dr Zumin Shi, Associate Professor of Human Nutrition, Qatar University

Introduction

The public health measures introduced to reduce the transmission of COVID-19 have had significant impact on physical, mental and social health and wellbeing, including increased levels of anxiety, stress, and depression in the population.¹ The widespread but relatively understudied impact of disease outbreaks on mental health and wellbeing has been referred to as a 'second pandemic'² and the 'forgotten plague'.³ In addition to being a health burden in itself, mental health fatigue is associated with reduced compliance to public health measures. The negative mental health effects of severe public health measures may be moderated by trust in the government authorities implementing the restrictions. Political trust may change the perception of public health measures from restrictive to protective. Public health and public trust are the defining dyad for the 21st century⁴ and trust in government is regarded as an important determinant of public health outcomes. Understanding the mechanisms of the negative effects of strict public health measures will help in the development of appropriate public health actions before and during future disease outbreaks, epidemics or pandemics.

Objectives

The objectives were to investigate the associations between stringency of COVID-19 social distancing policies and mental health outcomes, and the moderating effect of trust in government and gender.

Methods

Secondary analysis of publicly available cross sectional data from a global online COVID-19 survey conducted between 20 March and 7 April 2020.⁵

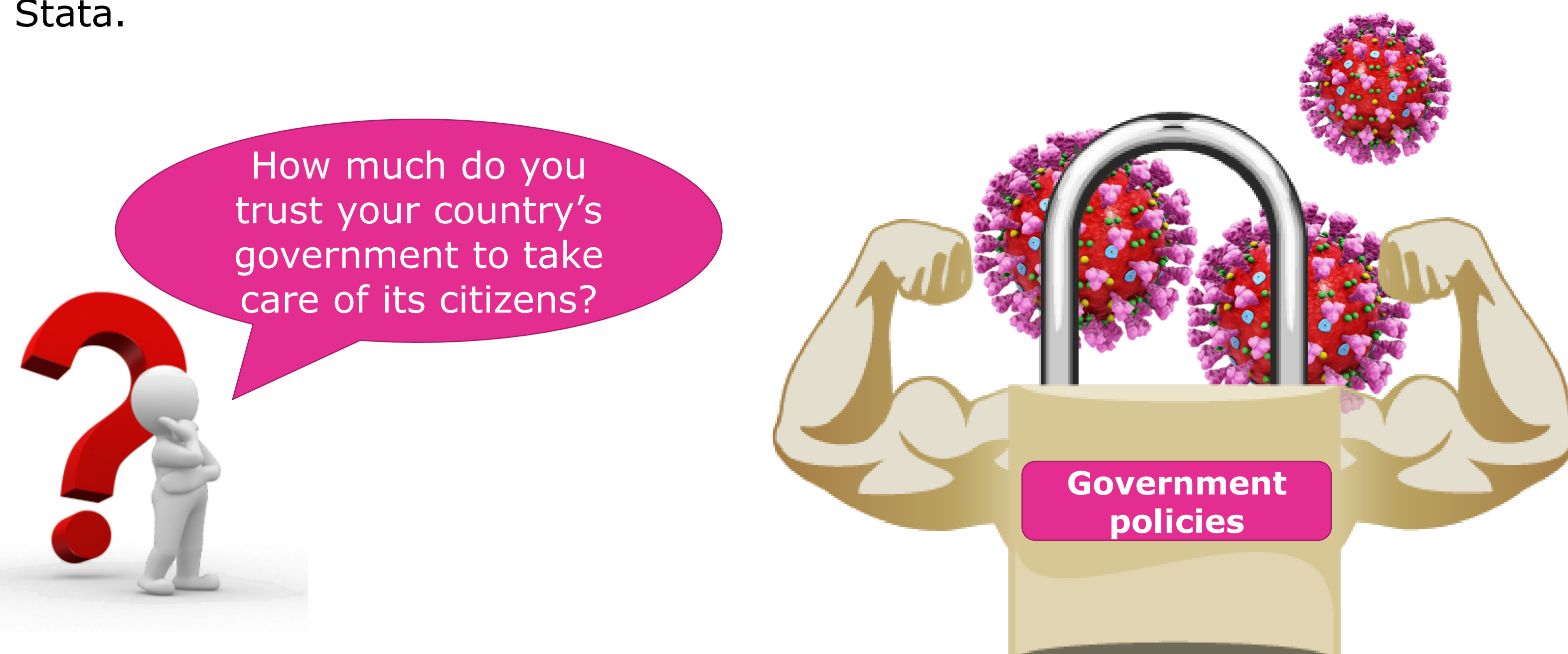
Participants: 106,497 adults (18 years of age and over) from 58 countries.

Main outcome measures: The depression index was calculated from the Patient Health Questionnaire-9 (PHQ-9), omitting the item related to suicidal ideation. The worries index was calculated from 5 items developed for the survey related to anxiety and concerns about COVID-19.

Exposure measure: The stringency index was calculated from the Oxford COVID-19 Government Response Tracker (OxCGRT) publicly available data.

Effect modifier measures were gender and trust in government, which was sourced from 1 item related to extent of trust in the government to take care of its citizens.

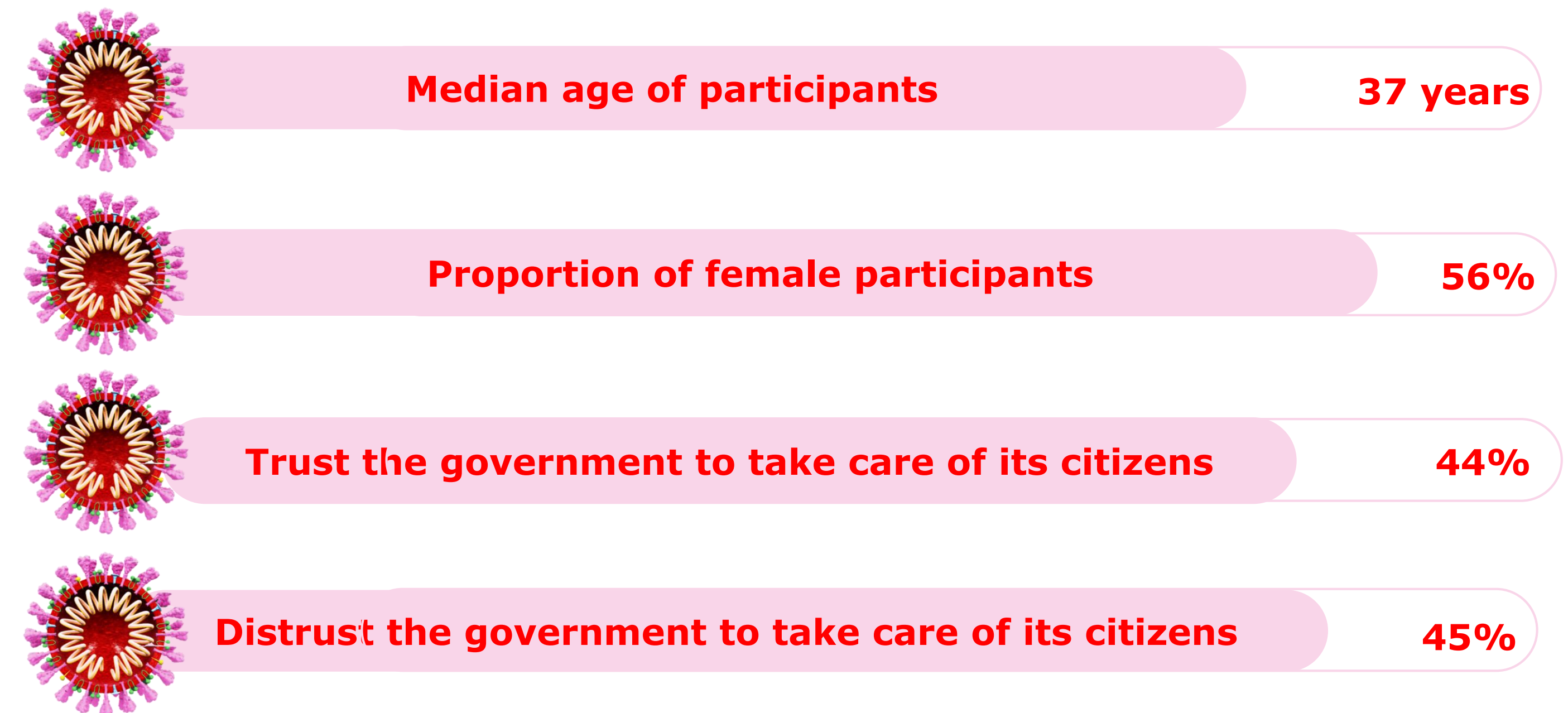
Multivariable regression was conducted to determine the three-way interaction between the exposure, modifier and outcome measures, adjusting for age, income and education. Marginal mean scores for the outcome measures were visually presented using marginsplot command in Stata.



References

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Results



Women had higher levels of depression and worries than men. People with the highest levels of trust had the lowest levels of depression and worries. Among people who strongly trusted the government, an increase in the stringency of policies was associated with an increase in worries. Among men who distrusted the government, an increase in policy stringency was associated with an increase in depression. In women who strongly distrusted the government, there was an inverted U-shaped association between policy stringency and both worries and depression (Figures 1 & 2). Once policies exceeded the 50 point mark on the stringency index, women benefited from the most stringent policies, yet men did not, particularly men who strongly trust or distrust the government.

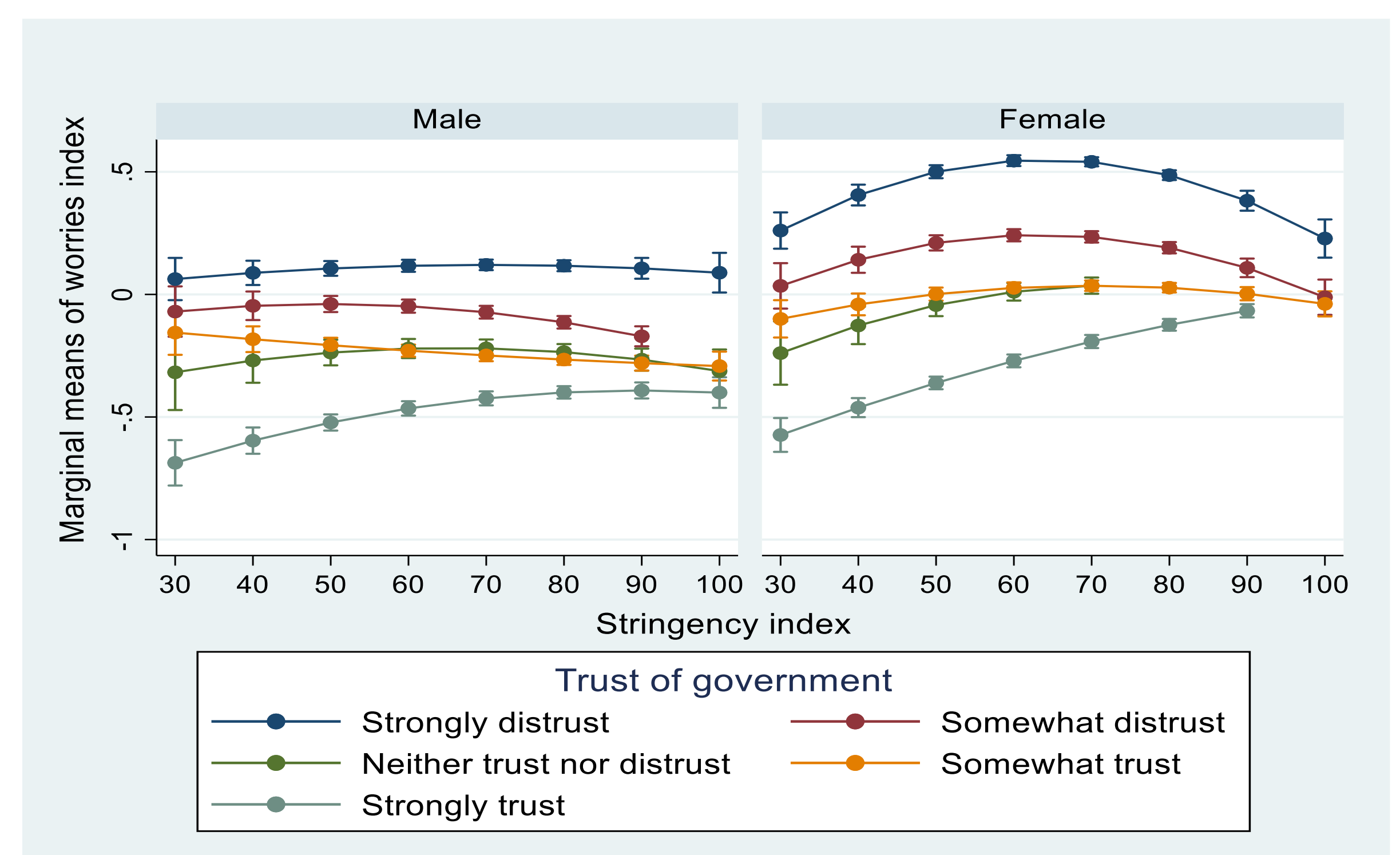


Figure 1 Interaction between trust in government and stringency index in relation to worries index

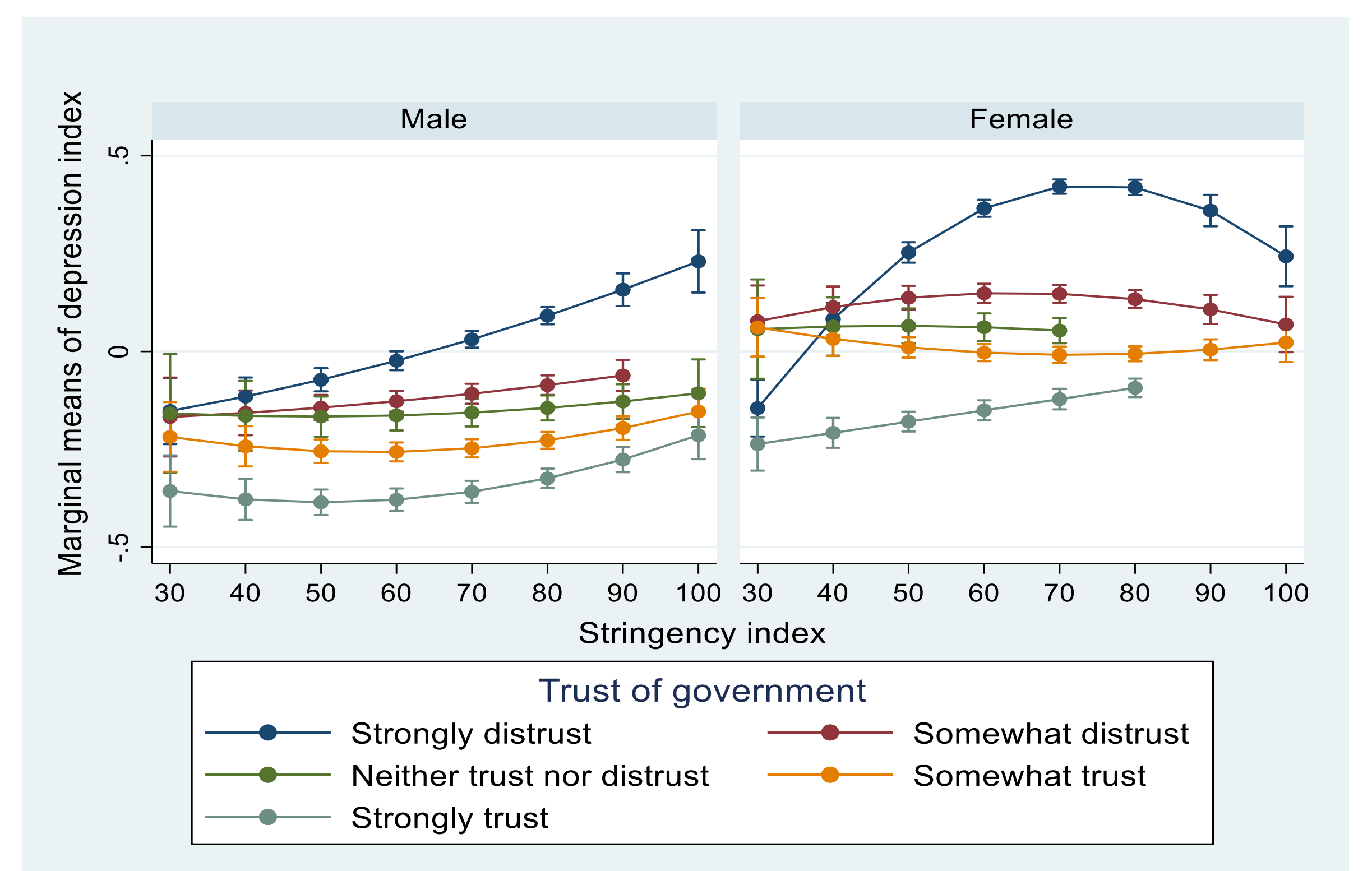


Figure 2 Interaction between trust in government and stringency index in relation to depression index

Both models adjusted for age, education and income (country specific tertile). P for gender, trust in government and stringency index interaction <0.001.

Conclusions

As the stringency of public health measures increases, so too do depression and worries. For safe and effective public health measures, governments should develop strategies to increase trust in their actions.