

## Supplementary tables

*Supplementary Table 1. Hazard ratios (and 95% confidence intervals) for COVID 19 related mortality between 2 March 2020 and 15 May 2020 in England and Wales for non-Christian religious groups compared to Christians, stratified by sex. males*

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
	<b>+Age</b>	<b>+Geography Variables</b>	<b>+Socio economic status variables</b>	<b>+Household variables</b>
<b>No religion</b>	0.82 (0.79-0.86)	0.82 (0.78-0.86)	0.85 (0.82-0.89)	0.84 (0.80-0.88)
<b>Buddhist</b>	1.19 (0.92-1.54)	1.02 (0.79-1.31)	1.09 (0.85-1.42)	1.07 (0.83-1.39)
<b>Hindu</b>	1.88 (1.69-2.09)	1.32 (1.19-1.47)	1.39 (1.24-1.56)	1.44 (1.28-1.61)
<b>Jewish</b>	2.14 (1.89-2.42)	1.54 (1.36-1.74)	1.84 (1.63-2.09)	1.89 (1.67-2.14)
<b>Muslim</b>	2.49 (2.32-2.67)	1.67 (1.55-1.79)	1.51 (1.38-1.64)	1.52 (1.39-1.66)
<b>Sikh</b>	1.54 (1.32-1.81)	1.18 (1.00-1.38)	1.13 (0.95-1.33)	1.20 (1.02-1.42)
<b>Other</b>	0.90 (0.69-1.17)	0.77 (0.59-1.00)	0.80 (0.61-1.04)	0.78 (0.60-1.02)
<b>Religion not stated</b>	0.88 (0.83-0.93)	0.87 (0.82-0.92)	0.86 (0.81-0.90)	0.84 (0.80-0.89)

	<b>Model 5</b>	<b>Model 6</b>	<b>Model 7</b>
	<b>Self-reported health variables</b>	<b>Occupational Exposure variables</b>	<b>Ethnicity</b>
<b>No religion</b>	0.83 (0.80-0.87)	0.83 (0.80-0.87)	0.84 (0.80-0.87)
<b>Buddhist</b>	1.09 (0.84-1.41)	1.08 (0.84-1.40)	0.88 (0.68-1.14)
<b>Hindu</b>	1.38 (1.23-1.55)	1.39 (1.24-1.56)	0.95 (0.84-1.07)
<b>Jewish</b>	1.89 (1.67-2.14)	1.90 (1.68-2.15)	1.92 (1.69-2.17)
<b>Muslim</b>	1.43 (1.30-1.56)	1.43 (1.30-1.56)	1.03 (0.94-1.13)
<b>Sikh</b>	1.16 (0.99-1.37)	1.18 (1.00-1.39)	0.79 (0.67-0.94)
<b>Other</b>	0.75 (0.58-0.98)	0.76 (0.58-0.99)	0.65 (0.50-0.85)
<b>Religion not stated</b>	0.83 (0.79-0.88)	0.83 (0.79-0.88)	0.83 (0.78-0.87)

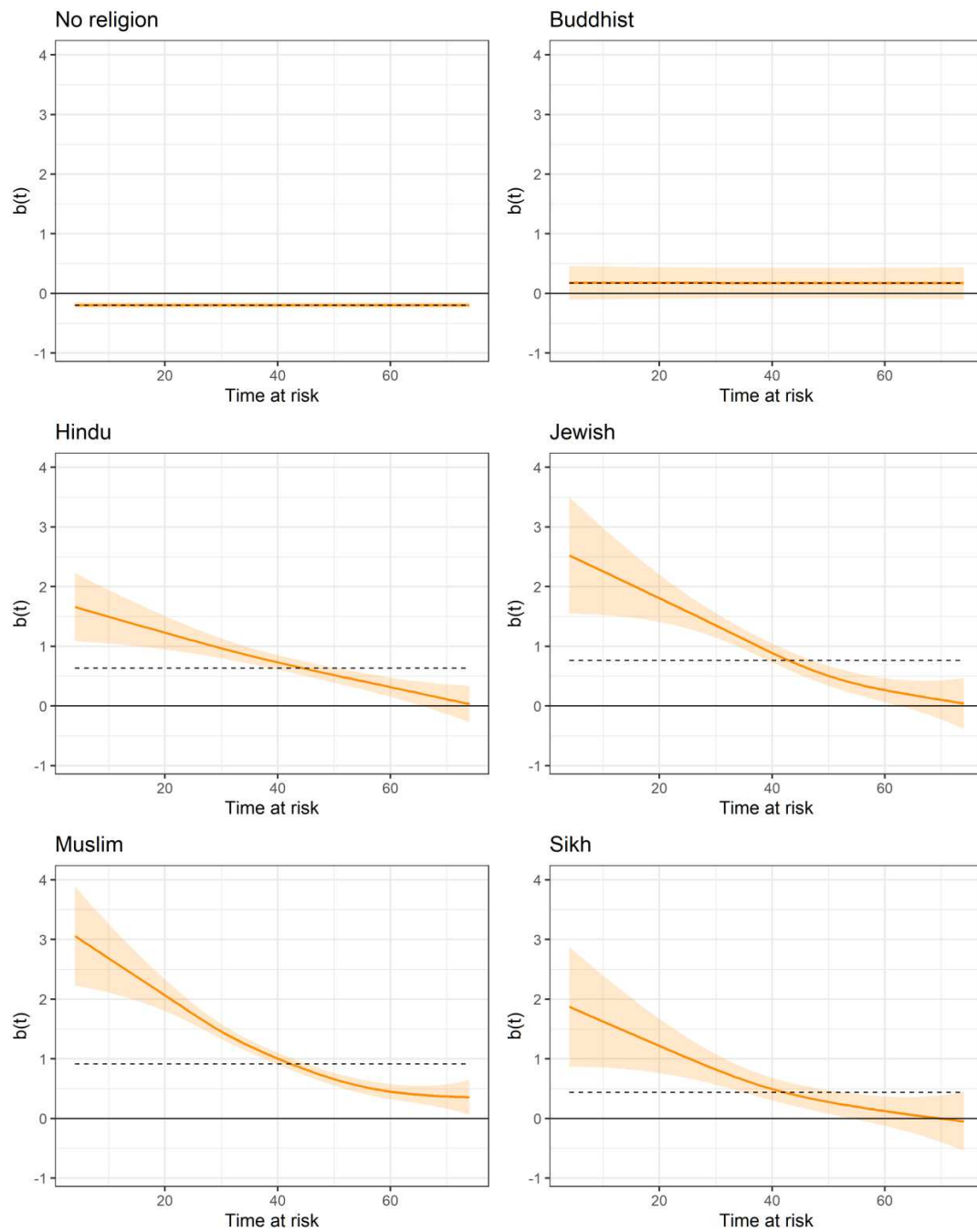
*Supplementary Table 2. Hazard ratios (and 95% confidence intervals) for COVID 19 related mortality between 2 March 2020 and 15 May 2020 in England and Wales for non-Christian religious groups compared to Christians, stratified by sex, females*

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
	<b>+Age</b>	<b>+Geography Variables</b>	<b>+Socio economic status variables</b>	<b>+Household variables</b>
<b>No religion</b>	0.83 (0.78-0.89)	0.83 (0.78-0.89)	0.88 (0.82-0.94)	0.87 (0.82-0.93)
<b>Buddhist</b>	0.95 (0.68-1.32)	0.79 (0.57-1.10)	0.96 (0.68-1.34)	0.94 (0.67-1.31)
<b>Hindu</b>	1.81 (1.58-2.06)	1.30 (1.14-1.49)	1.48 (1.28-1.72)	1.52 (1.31-1.77)
<b>Jewish</b>	1.50 (1.29-1.74)	1.12 (0.96-1.30)	1.22 (1.04-1.42)	1.26 (1.08-1.47)
<b>Muslim</b>	1.90 (1.72-2.10)	1.34 (1.21-1.48)	1.28 (1.13-1.46)	1.29 (1.14-1.47)
<b>Sikh</b>	1.25 (1.02-1.53)	0.98 (0.80-1.21)	1.05 (0.85-1.31)	1.05 (0.85-1.31)
<b>Other</b>	0.81 (0.60-1.09)	0.80 (0.59-1.07)	0.85 (0.63-1.15)	0.83 (0.61-1.12)
<b>Religion not stated</b>	0.84 (0.79-0.89)	0.83 (0.78-0.88)	0.82 (0.77-0.88)	0.81 (0.76-0.86)

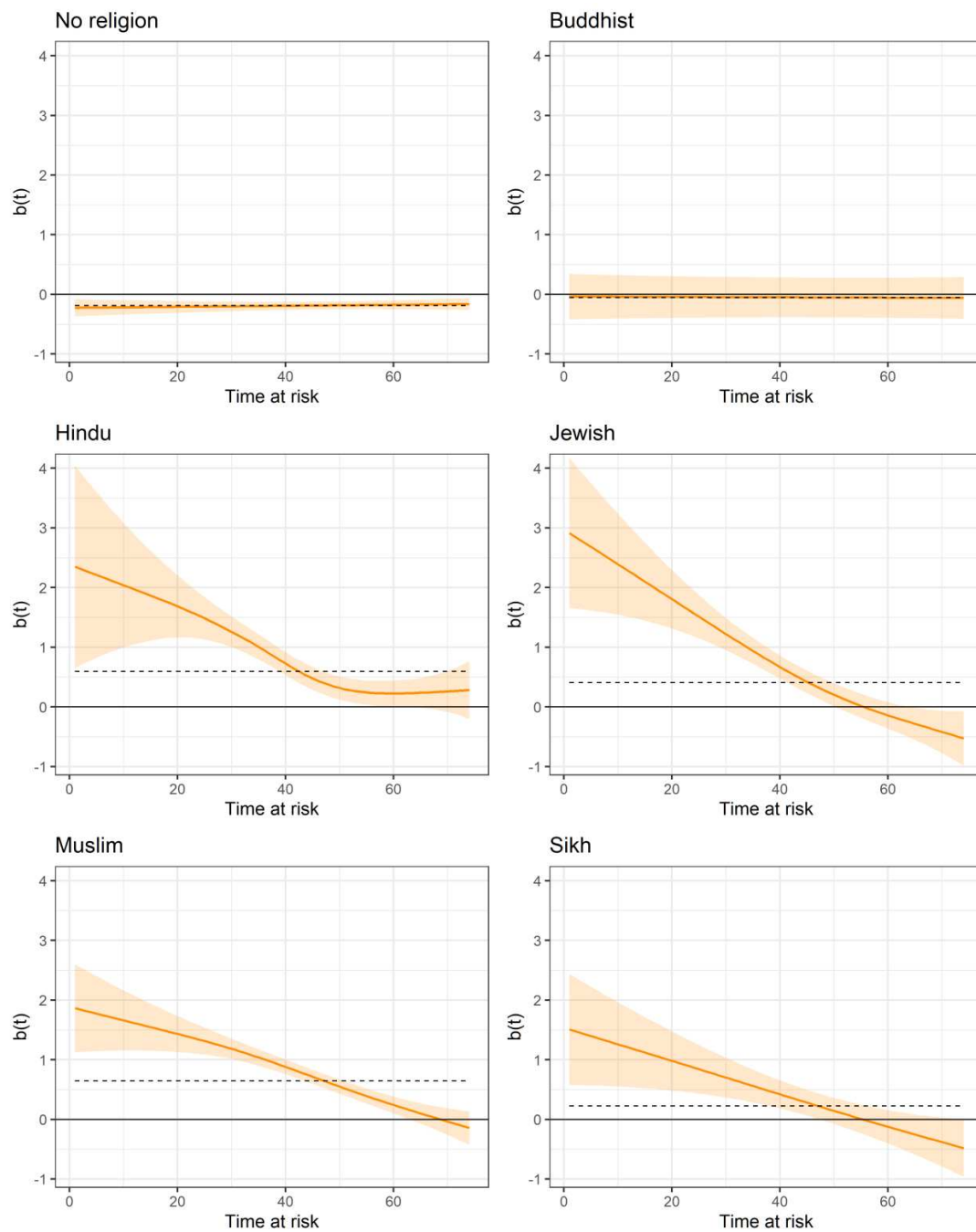
  

	<b>Model 5</b>	<b>Model 6</b>	<b>Model 7</b>
	<b>+Self-reported health variables</b>	<b>+Occupational Exposure variables</b>	<b>+Ethnicity</b>
<b>No religion</b>	0.87 (0.81-0.93)	0.87 (0.81-0.93)	0.87 (0.82-0.93)
<b>Buddhist</b>	0.81 (0.58-1.14)	0.80 (0.57-1.12)	0.68 (0.48-0.96)
<b>Hindu</b>	1.38 (1.18-1.60)	1.38 (1.19-1.61)	1.09 (0.93-1.28)
<b>Jewish</b>	1.19 (1.02-1.39)	1.20 (1.03-1.39)	1.21 (1.04-1.41)
<b>Muslim</b>	1.13 (0.99-1.29)	1.12 (0.98-1.27)	0.92 (0.80-1.05)
<b>Sikh</b>	0.97 (0.78-1.21)	0.97 (0.78-1.21)	0.77 (0.61-0.96)
<b>Other</b>	0.74 (0.54-0.99)	0.74 (0.55-1.00)	0.70 (0.52-0.95)
<b>Religion not stated</b>	0.80 (0.75-0.85)	0.80 (0.75-0.85)	0.79 (0.75-0.85)

Supplementary figure 1. Male Schoenfeld residuals from Age adjusted Cox Regression model



Supplementary figure 2. Female Schoenfeld residuals from Age adjusted Cox Regression model



*Supplementary table 3. Pre and post lockdown, age adjusted hazard ratios of COVID 19 related mortality between 2 March 2020 and 15 May 2020 in England and Wales for non-Christian religious groups compared to Christians, stratified by sex. males*

	<b>Pre Lockdown</b>	<b>Post Lockdown</b>
<b>No religion</b>	0.85 (0.78-0.81)	0.92 (0.81-0.85)
<b>Buddhist</b>	1.46 (0.93-1.09)	2.29 (1.09-1.49)
<b>Hindu</b>	2.59 (2.17-1.63)	3.08 (1.63-1.86)
<b>Jewish</b>	3.53 (2.94-1.63)	4.25 (1.63-1.92)
<b>Muslim</b>	3.97 (3.56-1.96)	4.42 (1.96-2.15)
<b>Sikh</b>	2.23 (1.73-1.30)	2.88 (1.30-1.58)
<b>Other religion</b>	0.93 (0.56-0.89)	1.55 (0.89-1.21)
<b>Religion not stated</b>	0.90 (0.81-0.87)	1.00 (0.87-0.93)

*Supplementary table 4. Pre and post lockdown, age adjusted hazard ratios of COVID 19 related mortality between 2 March 2020 and 15 May 2020 in England and Wales for non-Christian religious groups compared to Christians, stratified by sex. females*

	<b>Pre Lockdown</b>	<b>Post Lockdown</b>
<b>No religion</b>	0.97 (0.85-0.79)	1.10 (0.79-0.86)
<b>Buddhist</b>	1.18 (0.62-0.89)	2.28 (0.89-1.30)
<b>Hindu</b>	3.53 (2.87-1.35)	4.35 (1.35-1.61)
<b>Jewish</b>	3.02 (2.39-1.10)	3.81 (1.10-1.34)
<b>Muslim</b>	3.60 (3.07-1.46)	4.21 (1.46-1.65)
<b>Sikh</b>	1.98 (1.39-1.06)	2.82 (1.06-1.35)
<b>Other religion</b>	1.10 (0.62-0.74)	1.93 (0.74-1.05)
<b>Religion not stated</b>	0.92 (0.81-0.82)	1.05 (0.82-0.88)

*Supplementary table 5. Percentage of each religious group associating with white and non-white ethnicities in England and Wales*

	<b>Percentage of deaths involving COVID-19 among White ethnic group</b>	<b>Percentage of deaths involving COVID-19 among non-White ethnic groups</b>	<b>Percentage identifying as White at the 2011 Census</b>	<b>Percentage identifying as non-White at the 2011 Census</b>
<b>No religion</b>	94.00%	6.00%	94.30%	5.70%
<b>Christian</b>	94.10%	5.90%	93.00%	7.00%
<b>Buddhist</b>	26.60%	73.40%	34.40%	65.60%
<b>Hindu</b>	1.40%	98.60%	1.10%	98.90%
<b>Jewish</b>	95.60%	4.40%	93.60%	6.40%
<b>Muslim</b>	7.80%	92.20%	7.50%	92.50%
<b>Sikh</b>	1.60%	98.40%	1.50%	98.50%
<b>Other religion</b>	66.30%	33.70%	76.50%	23.50%
<b>Religion not stated</b>	90.60%	9.40%	87.40%	12.60%

*Source: Census 2011*

*Supplementary table 6. Percentage of each religious group falling in one of two socio economic classifications, 2012 and 2019*

	<b>Managerial and Professional occupations</b>		<b>Routine and Manual Occupations</b>		
	<b>2012</b>	<b>2019</b>	<b>2012</b>	<b>2019</b>	
<b>No Religion</b>	26.59%	28.89%	<b>No Religion</b>	19.59%	18.04%
<b>Christian</b>	22.91%	24.88%	<b>Christian</b>	19.31%	16.76%
<b>Buddhist</b>	27.80%	28.50%	<b>Buddhist</b>	23.53%	21.39%
<b>Hindu</b>	29.55%	32.51%	<b>Hindu</b>	15.92%	13.67%
<b>Jewish</b>	36.86%	32.33%	<b>Jewish</b>	4.35%	5.06%
<b>Muslim</b>	10.88%	12.92%	<b>Muslim</b>	14.14%	12.86%
<b>Sikh</b>	20.41%	25.03%	<b>Sikh</b>	19.09%	17.22%
<b>Any Other</b>	29.61%	31.03%	<b>Any Other</b>	16.33%	15.25%

*Source: Annual Population Survey 2012 and 2019*