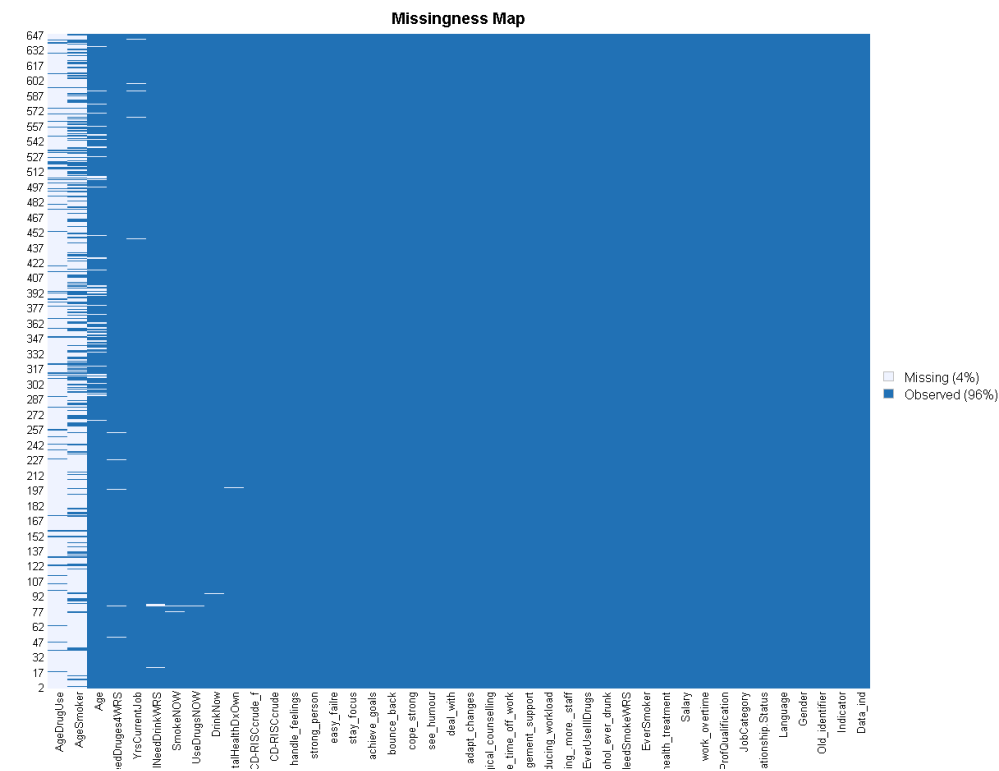


SUPPLEMENTARY INFORMATION

Supplementary Table S1: Summary of missing data in the original dataset

Missing data:	N (%)
Age	49 (7.6%)
Years employed in current role	5 (0.8%)
Current smoker	2 (0.3%)
Current drinker	1 (0.2%)
Current illicit drug user	1 (0.2%)
Ever diagnosed with a mental health condition	1 (0.2%)
Feel need to use drink to manage WRS	3 (0.5%)
Feel need to use illicit drugs to manage WRS	5 (0.8%)

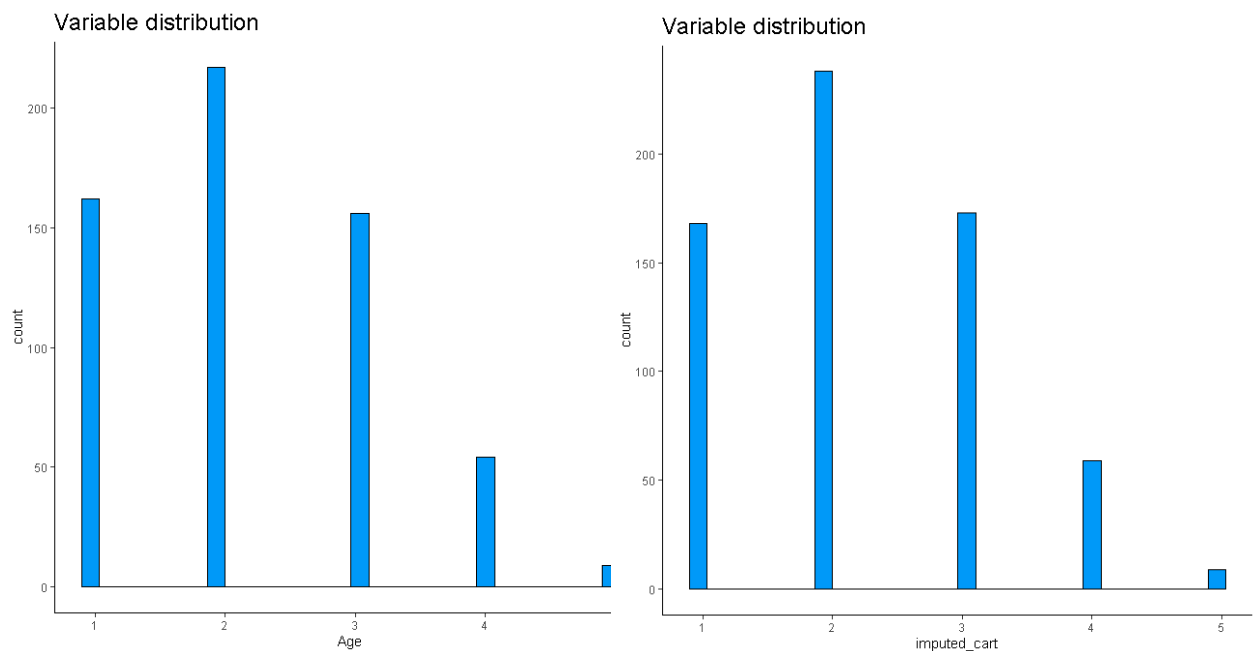
The range of missingness in the dataset is between 0.2% and 7.6%. Age was the only factor with greater than 1% of the data missing; as such, it was the only factor for which imputation was performed.



Supplementary Fig. S1: Missingness map of the dataset

Supplementary Table S2: Summary statistics of Age covariable following imputation

	Missing values	Minimum	First quartile	Median	Mean	Third quartile	Maximum
Original	49	1	1	2	2.216	3	5
Predictive mean matching	0	1	1	2	2.234	3	5
Classification and regression tree	0	1	1	2	2.232	3	5
Lasso linear regression	0	0.574	1	2	2.401	3	5



Supplementary Fig. S2: Distribution of Age factor before and after CART imputation

Supplementary Table S3: Unadjusted logistic regression analysis of the predictors of CD-RISC-10 score (all variables)

Variables	OR (95% CI) *			P value *		
	Doctors	Ambulance personnel	Overall	Doctors	Ambulance personnel	Overall
Gender						
Male	1.00	1.00	1.00			
Female	2.45 (1.44-4.26)	0.92 (0.60-1.42)	1.40 (1.01- 1.95)	0.001	0.711	0.045
Age						
20-29	1.00	1.00	1.00			
30-39	0.99 (0.53-1.82)	1.30 (0.66-2.65)	0.94 (0.62- 1.44)	0.969	0.459	0.782
40-49	0.95 (0.47-1.89)	1.89 (0.95-3.92)	1.20 (0.77- 1.88)	0.877	0.078	0.424
>50	0.75 (0.29-1.83)	1.39 (0.57-3.39)	0.91 (0.49- 1.65)	0.535	0.463	0.751
Home language						
English	1.00	1.00	1.00			
Afrikaans	0.81 (0.41-1.53)	0.84 (0.51-1.4)	0.77 (0.53- 1.11)	0.522	0.498	0.165
IsiXhosa	1.45 (0.66-3.14)	1.23 (0.68-2.21)	1.20 (0.76- 1.87)	0.348	0.494	0.432
Other	0.88 (0.04-9.36)	2.21 (0.26-19.00)	1.45 (0.28- 6.69)	0.917	0.436	0.633
Relationship Status						
Married	1.00	1.00	1.00			
Never married	1.56 (0.92-2.66)	0.82 (0.52-1.29)	1.09 (0.77- 1.53)	0.100	0.389	0.638
Divorced/ Separated/ Widowed	1.50 (0.47-4.48)	0.92 (0.43-1.87)	1.06 (0.57- 1.93)	0.472	0.822	0.839
Professional health qualification						
No	1.00	1.00	1.00			

Yes	N/A	1.22 (0.69-2.25)	1.35 (0.78- 2.43)	N/A	0.512	0.304
Job category						
Operational services/ EMS		1.00	1.00			
Support staff/ EMS		0.69 (0.42-1.12)	0.69 (0.42- 1.12)		0.142	0.142
Junior doctors	1.00		1.23 (0.74- 2.04)			0.415
Senior doctors	0.92 (0.54-1.58)		1.13 (0.76- 1.68)	0.752		0.544
Years employed in current role						
	1.00 (0.95-1.04)	1.03 (1.00-1.07)	1.01 (0.99- 1.04)	0.832	0.056	0.379
Over-time work						
No	1.00	1.00	1.00			
Yes	4.12 (0.72-77.60)	0.92 (0.58-1.46)	1.13 (0.75- 1.73)	0.189	0.708	0.559
Monthly Salary (ZAR)						
R0-R15 000		1.00	1.00			
R15 001-R30 000		0.84 (0.54-1.31)	0.84 (0.54- 1.31)		0.44	0.44
R30 001-R50 000	1.00	0.61 (0.23-1.44)	1.15 (0.70- 1.88)		0.283	0.588
> R50 001	0.74 (0.44-1.26)		1.03 (0.65- 1.62)	0.268		0.910
Age started smoking	1.01 (0.93-1.09)	1.01 (0.93-1.09)	1.01 (0.94- 1.08)	0.812	0.812	0.729
Age started illicit drugs	1.24 (0.91-1.81)	1.05 (0.95-1.16)	1.07 (0.97- 1.17)	0.193	0.315	0.171
Smoking history						
Never used	1.00	1.00	1.00			
Previous smoker	1.23 (0.50-2.92)	1.16 (0.53-2.41)	1.16 (0.65- 2.02)	0.642	0.702	0.617
Current smoker	0.15 (0.02-0.54)	0.90 (0.55-1.45)	0.65 (0.42- 0.98)	0.012	0.664	0.046

Alcohol history						
Never used	1.00	1.00	1.00			
Previous alcohol user	0.73 (0.31-1.67)	0.40 (0.19-0.79)	0.52 (0.30- 0.87)	0.452	0.011	0.015
Current drinker	0.56 (0.30-1.05)	1.04 (0.64-1.71)	0.83 (0.57- 1.22)	0.069	0.878	0.349
Illicit drug use						
Never used	1.00	1.00	1.00			
Previous illicit drug user	0.50 (0.11-1.67)	0.65 (0.27-1.42)	0.58 (0.28- 1.12)	0.297	0.305	0.124
Current Drug user	0.28 (0.01-1.65)	1.26 (0.32-4.25)	0.75 (0.24- 2.02)	0.237	0.722	0.589
Substance use to manage WRS						
Feel need to smoke to manage WRS	0.67 (0.32-1.32)	1.16 (0.71-1.87)	0.93 (0.63- 1.38)	0.258	0.548	0.731
Feel need to drink alcohol to manage WRS	1.32 (0.71-2.44)	1.67 (0.86-3.16)	1.53 (0.98- 2.38)	0.379	0.121	0.060
Feel need to use illicit drugs to manage WRS	1.11 (0.33-3.42)	1.03 (0.32-2.9)	1.08 (0.47- 2.32)	0.863	0.959	0.850
Mental health						
Ever diagnosed with a mental health condition	1.73 (0.97-3.06)	1.74 (0.90-3.31)	1.81 (1.18- 2.75)	0.061	0.094	0.006
Currently on treatment for mental health condition	1.51 (0.78-2.90)	1.77 (0.80-3.86)	1.69 (1.03- 2.77)	0.213	0.151	0.037

* Statistically significant results are indicated in bold

N/A: not applicable; ZAR/R: South African Rand

Supplementary Table S4: Adjusted logistic regression analysis of the predictors of CD-RISC-10 score (all variables)

Variables	OR (95% CI) †*			P value †*		
	Doctors	Ambulance personnel	Overall	Doctors	Ambulance personnel	Overall
Home language						
English	1.00	1.00	1.00			
Afrikaans	0.78 (0.39-1.51)	0.83 (0.50-1.38)	0.76 (0.52- 1.11)	0.477	0.467	0.153
IsiXhosa	1.51 (0.67-3.36)	1.31 (0.72-2.38)	1.18 (0.75- 1.85)	0.310	0.384	0.475
Other	0.80 (0.04-9.04)	2.21 (0.25-19.40)	1.58 (0.30- 7.40)	0.858	0.442	0.561
Relationship Status						
Married	1.00	1.00	1.00			
Never married	1.39 (0.73-2.69)	0.98 (0.59-1.65)	1.10 (0.74- 1.63)	0.318	0.948	0.653
Divorced/ Separated/ Widowed	1.19 (0.36-3.72)	0.99 (0.46-2.07)	1.00 (0.54- 1.83)	0.773	0.980	0.991
Professional health qualification						
No	1.00	1.00	1.00			
Yes	N/A	1.09 (0.60-2.06)	1.40 (0.80- 2.56)	N/A	0.784	0.254
Job category						
Operational services/ EMS		1.00	1.00			
Support staff/ EMS		0.73 (0.43-1.22)	0.65 (0.39- 1.07)		0.237	0.099
Junior doctors	1.00		1.32 (0.69- 2.53)			0.394
Senior doctors	0.99 (0.45-2.17)		1.09 (0.72- 1.64)	0.982		0.679
Years employed in current role	1.00 (0.93-1.08)	1.03 (0.99-1.07)	1.02 (0.99- 1.05)	0.930	0.184	0.284

Over-time work						
No	1.00	1.00	1.00			
Yes	0.21 (0.01-1.27)	0.96 (0.60-1.56)	1.13 (0.74- 1.74)	0.155	0.879	0.582
Monthly Salary (ZAR)						
R0-R15 000		1.00	1.00			
R15 001-R30 000		0.77 (0.48-1.22)	0.83 (0.52- 1.30)		0.266	0.409
R30 001-R50 000	1.00	0.54 (0.19-1.35)	1.22 (0.71- 2.09)		0.206	0.475
> R50 001	0.72 (0.36-1.44)		1.01 (0.64- 1.61)	0.358		0.950
Age started smoking						
	1.11 (0.90-1.39)	1.01 (0.93-1.08)	1.01 (0.94- 1.08)	0.315	0.897	0.782
Age started illicit drugs						
	1.36 (0.90-2.80)	1.05 (0.94-1.18)	1.07 (0.97- 1.20)	0.231	0.403	0.195
Smoking history						
Never used	1.00	1.00	1.00			
Previous smoker	1.68 (0.66-4.25)	1.06 (0.48-2.27)	1.26 (0.69- 2.24)	0.273	0.873	0.442
Current smoker	0.21 (0.03-0.77)	0.91 (0.55-1.49)	0.77 (0.45- 1.09)	0.042	0.714	0.127
Alcohol history						
Never used	1.00	1.00	1.00			
Previous alcohol user	0.78 (0.32-1.84)	0.39 (0.18-0.78)	0.52 (0.3- 0.88)	0.568	0.010	0.015
Current drinker	0.64 (0.33-1.23)	1.12 (0.68-1.88)	0.91 (0.62- 1.36)	0.18	0.657	0.654
Illicit drug use						
Never used	1.00	1.00	1.00			
Previous illicit drug user	0.73 (0.16-2.61)	0.64 (0.26-1.42)	0.63 (0.30- 1.25)	0.651	0.296	0.206
Current Drug user	0.31 (0.02-1.91)	1.24 (0.32-4.22)	0.76 (0.24- 2.07)	0.283	0.736	0.611

Substance use to manage WRS						
Feel need to smoke to manage WRS	0.76 (0.36-1.54)	1.21 (0.73-1.97)	1.00 (0.66- 1.48)	0.449	0.456	0.98
Feel need to drink alcohol to manage WRS	1.17 (0.61-2.20)	1.73 (0.89-3.33)	1.56 (0.99- 2.43)	0.628	0.100	0.053
Feel need to use illicit drugs to manage WRS	1.07 (0.31-3.41)	1.06 (0.33-3.00)	1.07 (0.47- 2.30)	0.909	0.921	0.872
Mental health						
Ever diagnosed with a mental health condition	1.56 (0.87-2.81)	1.75 (0.90-3.35)	1.77 (1.15- 2.70)	0.136	0.095	0.009
Currently on treatment for mental health condition	1.38 (0.70-2.69)	1.80 (0.80-3.95)	1.70 (1.03- 2.80)	0.348	0.145	0.037

* Statistically significant results are indicated in bold; † Data adjusted for age and gender

N/A: not applicable; ZAR/R: South African Rand