

Supplementary File 2

To: Bozorgmehr,K., Maier,W., Brenner,H., Saum,K.U., Stock,C., Miksch,A., Holleczeck,B., Szecsenyi,J., & Razum,O. **Social disparities in Disease Management Programmes for coronary heart disease in Germany: A cross-classified multilevel analysis.**

Non-responder analysis: Methods

In the non-responder analysis, we compared the participants who remained in the cohort until t3 (N=7,012) with those who were excluded in this study (N=2,937) with respect to relevant self-reported baseline characteristics (Table 1_Supplement2). Absolute and relative frequencies were calculated for all selected variables stratified by sex. Contingency tables were drawn to assess if there are significant differences between the two groups (“cohort participants” vs. “excluded”) with respect to the selected characteristics. To this end, two-sided chi-square tests of independence were conducted (by sex and for the total population), testing the null-hypothesis that there are no differences in the distribution of proportions across response categories of respective outcome variables between the two groups (“cohort participants” vs. “excluded”).

Non-responder analysis: Results/Discussion

In addition to the differences reported in the main manuscript, we observed statistically significant differences in the baseline characteristics between the participants who remained in the cohort until t3 (N=7,012) and those who were excluded until t3 (N=2,937) with respect to: the prevalence of hypercholesterolemia (mainly among men: 3 percentage points higher among excluded) and current smoking behaviour (mainly among men: 6 percentage points higher among excluded). The proportion of alcohol abstainers was significantly higher among the excluded population. The proportion of those who were excluded was significantly higher in BMI categories above 30 kg/m² compared to cohort participants. Small statistically significant differences between the two groups were observed with respect to the immigration background (Table 1_Supplement2). Overall, no significant differences were observed with respect to the proportion of male and female among the two groups.

Supplementary File 2: Non-responder analysis comparing baseline characteristics of the participants who remained in the cohort until t3 (N=7,012) with those who were excluded until t3 due to death, non-response, or on health grounds and other or unknown reasons (N=2,937)

	Female			Male			Total		
	Cohort participants (N=3,890)	Excluded ^a (N=1,577)	p-value [§]	Cohort participants (N=3,122)	Excluded ^a (N=1,360)	p-value [§]	Cohort participants (N=7,012)	Excluded ^a (N=2,937)	p-value [§]
Age group	n (col%)			n (col%)			n (col%)		
50-54	763 (19.6)	208 (13.2)	<0.0001	580 (18.6)	165 (12.1)	<0.0001	1343 (19.2)	373 (12.7)	<0.0001
55-64	1814 (46.6)	581 (36.8)		1451 (46.5)	545 (40.1)		3265 (46.6)	1126 (38.3)	
65-74	1294 (33.3)	770 (48.8)		1074 (34.4)	636 (46.8)		2368 (33.8)	1406 (47.9)	
75-84	19 (0.5)	18 (1.1)		17 (0.5)	14 (1)		36 (0.5)	32 (1.1)	
Total	3890 (100)	1577 (100)		3122 (100)	1360 (100)		7012 (100)	2937 (100)	
Highest educational attainment*			<0.0001			<0.0001			<0.0001
Level I (lowest)	2889 (76.1)	1261 (82.6)		2100 (68.4)	992 (76.1)		4989 (72.7)	2253 (79.6)	
Level II	635 (16.7)	188 (12.3)		403 (13.1)	147 (11.3)		1038 (15.1)	335 (11.8)	
Level III (highest)	273 (7.2)	78 (5.1)		567 (18.5)	164 (12.6)		840 (12.2)	242 (8.6)	
Total	3797 (100)	1527 (100)		3070 (100)	1303 (100)		6867 (100)	2830 (100)	
Myocardial Infarction			<0.0001			<0.0001			<0.0001
No	3688 (98)	1431 (96.2)		2832 (92.2)	1166 (88.5)		6520 (95.4)	2597 (92.6)	
Yes	74 (2)	56 (3.8)		240 (7.8)	152 (11.5)		314 (4.6)	208 (7.4)	
Total	3762 (100)	1487 (100)	3072 (100)	1318 (100)	6834 (100)	2805 (100)			
Angina Pectoris			<0.0001			<0.0001			<0.0001
No	3443 (94.6)	1307 (90.7)		2625 (88.2)	1054 (83.5)		6068 (91.7)	2361 (87.3)	
Yes	198 (5.4)	134 (9.3)		351 (11.8)	209 (16.5)		549 (8.3)	343 (12.7)	
Total	3641 (100)	1441 (100)	2976 (100)	1263 (100)	6617 (100)	2704 (100)			
Coronary heart disease**			<0.0001			<0.0001			<0.0001
No	3411 (93.3)	1283 (89)		2556 (84.9)	1018 (79.5)		5967 (89.5)	2301 (84.5)	
Yes	244 (6.7)	158 (11)		453 (15.1)	263 (20.5)		697 (10.5)	421 (15.5)	
Total	3655 (100)	1441 (100)	3009 (100)	1281 (100)	6664 (100)	2722 (100)			
Hypercholesterolemia			0.104			0.040			0.010
No	1920 (54.6)	781 (57.2)		1585 (54.4)	710 (57.9)		3505 (54.5)	1491 (57.5)	
Yes	1594 (45.4)	584 (42.8)		1329 (45.6)	517 (42.1)		2923 (45.5)	1101 (42.5)	
Total	3514 (100)	1365 (100)	2914 (100)	1227 (100)	6428 (100)	2592 (100)			

Table1_Supplementary File 2 (cont.)		Female			Male			Total		
		Cohort participants (N=3,890)	Excluded (N=1,577)	p-value	Cohort participants (N=3,122)	Excluded (N=1,360)	p-value	Cohort participants (N=7,012)	Excluded (N=2,937)	p-value
(Current) Cigarette smoking										
No	2536 (67)	975 (65)	0.1670	1056 (34.2)	353 (26.6)	<0.0001	3592 (52.3)	1328 (47)	<0.0001	
Yes	1247 (33)	524 (35)		2030 (65.8)	976 (73.4)		3277 (47.7)	1500 (53)		
Total	3783 (100)	1499 (100)		3086 (100)	1329 (100)		6869 (100)	2828 (100)		
Alcohol consumption[†] in g/day according to WHO drinking categories										
Abstainers	1066 (33.9)	436 (40.5)	0.0010	482 (16.6)	257 (21.9)	0.0010	1548 (25.6)	693 (30.8)	<0.0001	
DI	1843 (58.7)	566 (52.6)		2197 (75.5)	836 (71.1)		4040 (66.8)	1402 (62.3)		
DII	200 (6.4)	58 (5.4)		170 (5.8)	55 (4.7)		370 (6.1)	113 (5)		
DIII	32 (1)	16 (1.5)		61 (2.1)	28 (2.4)		93 (1.5)	44 (2)		
Total	3141 (100)	1076 (100)		2910 (100)	1176 (100)		6051 (100)	2252 (100)		
Body Mass Index (kg/m²)										
BMI<25	1271 (32.7)	441 (28)	<0.0001	658 (21.1)	307 (22.6)	0.0130	1929 (27.5)	748 (25.5)	<0.0001	
BMI 25.00-29.99	1600 (41.1)	641 (40.6)		1675 (53.7)	674 (49.6)		3275 (46.7)	1315 (44.8)		
BMI 30.00-39.99	884 (22.7)	421 (26.7)		705 (22.6)	323 (23.8)		1589 (22.7)	744 (25.3)		
BMI ≥ 40	135 (3.5)	74 (4.7)		84 (2.7)	56 (4.1)		219 (3.1)	130 (4.4)		
Total	3890 (100)	1577 (100)		3122 (100)	1360 (100)		7012 (100)	2937 (100)		
Immigration background^{***}										
No	3514 (92.1)	1387 (90.5)	0.0560	2830 (91.7)	1194 (90.5)	0.1660	6344 (92)	2581 (90.5)	0.0190	
Yes	300 (7.9)	145 (9.5)		255 (8.3)	126 (9.5)		555 (8)	271 (9.5)		
Total	3814 (100)	1532 (100)		3085 (100)	1320 (100)		6899 (100)	2852 (100)		
Current economic activity										
Full-time employment	370 (9.8)	117 (7.9)	<0.0001	864 (28.1)	248 (19)	<0.0001	1234 (18)	365 (13)	<0.0001	
Part-time employment	576 (15.3)	143 (9.6)		45 (1.5)	15 (1.1)		621 (9.1)	158 (5.6)		
Self-employed	44 (1.2)	20 (1.3)		84 (2.7)	33 (2.5)		128 (1.9)	53 (1.9)		
Housewife/Domestic activity	1779 (47.2)	729 (49)		12 (0.4)	5 (0.4)		1791 (26.2)	734 (26.2)		
Retired	952 (25.3)	472 (31.7)		2005 (65.3)	973 (74.4)		2957 (43.2)	1445 (51.7)		
others	49 (1.3)	8 (0.5)		62 (2)	34 (2.6)		111 (1.6)	42 (1.5)		
Total	3770 (100)	1489 (100)		3072 (100)	1308 (100)		6842 (100)	2797 (100)		
Sex										
Female	-	-	-	-	-	-	3890 (55.5)	1577 (53.7)	0.1030	
Male	-	-	-	-	-	-	3122 (44.5)	1360 (46.3)		
Total	-	-	-	-	-	-	7012 (100)	2937 (100)		

Legend: All data refer to baseline characteristics (t0: 2000-2002) and are based on self-reports. **n.:** absolute frequency. **col%:** column percent.

Excluded:** This category refers to individuals who deceased (N=1,033), dropped-out (N=1,210) on health grounds (n=253) or other and unknown reasons (n=957), or did not respond and for whom neither patient-questionnaires nor GP-reported information was available (N=694). **§ p-values** of two-sided chi-square tests of independence, testing the null-hypothesis that there is no difference in the distribution of proportions across response categories of respective outcome variables between the two groups (cohort participants vs. excluded). ***Highest educational attainment:** Level I: no degree or minimum of nine years of education qualifying for professional training (Hauptschule). Level II: minimum of 10-11 years of education qualifying for professional training (Realschule/Mittlere Reife). Level III: minimum of 12-13 years of education qualifying for university entrance (Fachhochschulreife/Abitur). *Coronary heart disease:** defined as having myocardial infarction and/or angina pectoris. *****Immigration background:** defined as having (i) a foreign nationality or (ii) a German nationality and a place of birth outside of Germany. **†Alcohol consumption in g/d:** DI: female: 0-19.99 g/day; male: 0-39.99 g/day. DII: female: 20-39.99 g/day; male: 40-59.99 g/day. DIII: female: > 40.0 g/day; male: > 60.0 g/day.